THE OIL WEEKLY

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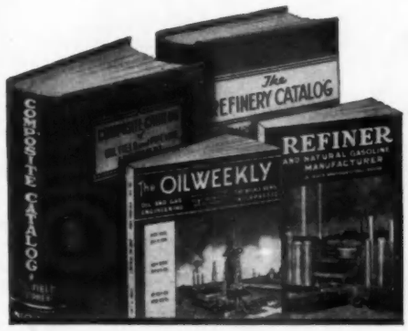

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The Oil Man's Calendar

FEB.	
9–12	American Institute of Mining and Metallurgical Engineers, Annual Meeting, New York.
10	American Petroleum Institute, Division of Production, Pacific Coast District, Los Angeles.
26–27	American Petroleum Institute, Division of Production, Southwestern District, Dallas, Texas.
28	North Texas Oil and Gas Association, Wichita Falls, Texas.
MAR.	
23–25	American Society of Mechanical Engineers, Houston, Texas.
26–27	American Petroleum Institute, Division of Production, Mid-Continent District, Tulsa.
APRIL	
9–10	American Petroleum Institute, Division of Production, Eastern District, Pittsburgh.
16–17	National Petroleum Association, Thirty-ninth Semi-Annual Meeting, Hotel Cleveland, Cleveland, Ohio.
21–24	American Association of Petroleum Geologists, Twenty-seventh Annual Meeting, Cosmopolitan Hotel, Denver, Colorado.
22–24	Petroleum Industry Electrical Association, Shreveport, Louisiana.
MAY	
25–28	American Petroleum Institute, Mid-Year Meeting, Biltmore Hotel, Oklahoma City.
NOV.	
9–13	American Petroleum Institute, Chicago.

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The Changing Panorama

Many Advance Calls For Information

Office Flooded With Requests For Data on the Latest Government Orders

Since THE OIL WEEKLY was first published we recall no article or news story which has provoked the advance call for information that we had during the past week on "P-98." Week before last, before THE OIL WEEKLY of January 12 went to press, we were advised that the signature on "P-98" was imminent and made arrangements to hold the presses, if necessary, to include "P-98" in that issue as an insert. But the order was not signed until Saturday, and it was not available for publication that day because it had not been filed in the Federal Register. Monday passed and we still had not received further word on it. Then on Tuesday we received a wire from our Washington office that our staff there had a copy, and that it would begin coming over the wire immediately. By 5 p.m. the order had come in by wire and had been set in type, and also by that time visitors had begun arriving at our office desiring galley proofs. By Wednesday morning the trickle of callers and phone calls had grown into a full-fledged stream, and by Wednesday evening requests for preprints of both "P-98" and the revisions on "M-68" which had also come to us by wire, had mounted into the hundreds. The stream of requests had included personal visits, phone calls, and telegrams from points as far away from Houston as Tulsa.

This call for copies of the actual order to be studied as closely as possible, of course, is simply indicative of the importance in which "P-98" is held by the industry. It might be called a life-and-death order.

In this week's issue you will find both the revised "M-68" and "P-98" in full, just as it came over the wire from Washington. You will also find an outline of procedure for obtaining various materials affected by it—this outline by members of our own staff who during the past few weeks have devoted most of their attention to priority affairs. It must be emphasized that in no way is the outline official, but it does have the benefit of study by men who have been following closely priorities matters since they began to be important.

Unhealthy Confusion . . .

With release of Preference Rating Order P-98 last week, much of the confusion existing with respect to the industry's operating position during the war was due to be clarified, because it formed the final segment of a three-piece pattern mapping out the route by which the industry is to both procure and use supplies necessary to conduct its operations. However, due to the lack of understanding on the part of the industry of some of the provisions of the orders (P-83, P-98 and M-68) the situation remains in a turmoil. Until these orders are fully digested and interpretations of several points cleared up, this unhealthy condition will continue.

Unfortunately there apparently is no way to gauge fully the influence of these orders upon the field operations of the industry, and thus companies have no idea how many wells they may be able to complete. It is the fear that drastic curtailment of drilling operations, with the exception of wildcats, has occurred—or perhaps is imminent in the future — that is causing much of the confusion. All of this is very unhealthy.

It is to be hoped that the situation is clarified shortly, but even then there will remain a complicated profusion of government priority controls. Under this condition, it behooves every one to make adequate provision in his organization for a complete understanding of the situation under which his particular phase of the oil business is to operate. Moreover, it is necessary to have arrangements for keeping informed of the frequently issued amendments and revisions to these priority controls. Everyone should be constantly alert to the possibilities of anticipating additional changes, and how they may influence his business.

Revising Consumption Estimates Upward

New Thoughts Are That Tire Rationing May Not Cut Demand Materially

Although, as one well known economist puts it, the estimation of consumption of petroleum products for this year is no longer a statistical proposition, there being so many new and uncertain factors in it, the urge to speculate on what total crude oil consumption this year will be, continues.

Some of the original estimates heard within the past two weeks are now being revised, and strangely enough they are being revised upward. Newspaper reports out of Washington suggesting that civilian consumption will be reduced as much as 35 percent, are being discounted, and while, generally, economists who have come rather close to the mark in estimating consumption, do think that there will be a drop in gasoline consumption, there are some who think that the drop in crude consumption will be small, if indeed the demand does not equal last year's.

One nationally known economist put it something like this: "I do not think that this thing need to be too bad on consumption." He said that he had estimated that due to a prospective falling off in gasoline usage, total demand might drop to 5 to 10 percent, with the likelihood being that the lesser figure would be more nearly right—and the possibility that there would be no drop at all in total crude oil demand.

Still another economist, while figuring that gasoline demand would be affected by rubber restrictions, went so far as to hazard the guess that crude oil demand might be up.

It was pointed out that only two thirds of gasoline consumption is subject to rubber restrictions, and that the demand for other products will not be affected by rubber restrictions.

The economist of one of the country's large integrated companies pointed out that the Bureau

of Mines estimate for January demand was up 12 percent for this month, over last year, insofar as gasoline is concerned, and with gasoline being used as the basis for estimating crude oil demand. Thus far there has come no estimate of lessened demand from the bureau. The economist mentioned above, while estimating a falling off in gasoline demand, said that it was his opinion that there would be very little if any falling off in crude oil demand, and that at the most it would not likely run more than 5 percent.

A Shot in the Dark . . .

Again and again we hear that Washington is talking in terms of a very small number of wells to be drilled in 1942. The effect of "M-68" and "P-98" on drilling (it has caused a drop which amounts close to a stoppage) surely must have been at least partially anticipated by the staff of the petroleum coordinator who advised with OPM. The feeling grows that this drastic immediate reduction in drilling was not only expected but possibly was desired.

The fact that "P-98" is announced as being effective until February 28, 1942, gives rise to the thought that possibly even more drastic regulations may be forthcoming.

It is not at all beyond the realm of possibilities that as few as 18,000 wells or even fewer, will be drilled this year, that material for half of these wells may be allocated to wildcats and that before the year is out priorities will be so controlled and administered that wells in proven *flowing* territories will get by far the greater bulk of allocated locations. The basis for this would be the saving of steel on pumping equipment.

The foregoing is purely speculation but it is something to think about.

Eastern Gas Supply, And "M-68" . . .

In its efforts to develop information as to what the oil industry would like to do, insofar as the drilling of wells in 1942 is concerned, THE OIL WEEKLY has contacted a large number of oil companies, individuals and state agencies all over the United States. From the information received to date and now being tabulated, it is apparent that the effect of "M-68" on drilling operations may be even more severe than was anticipated by those who prepared it.

From West Virginia comes this comment from David B. Reger, consulting geologist, of Morgantown, who has during the past assisted THE OIL WEEKLY in preparing its annual forecast on wells to be drilled: Says Mr. Reger:

"In your letter you ask further about opinions that may have been expressed on the subject of priorities in this region. The opinions are as many and as varied as there are oil and gas operators in the business. The present idea is that if OPM Order M-68 is allowed to stand without modification, drilling for both oil and gas in the Appalachian region will practically cease and a terrible famine of these products, especially gas, will soon result. An attempt is therefore being made to get a substantial downward modification of the requirement that only one oil well may be drilled on 40 acres and one gas well on 640 acres. My own opinion, for the Appalachian territory, is that an oil well should be allowed for each 10 acres and a gas well for each 50 acres. Otherwise it will be almost impossible to drill, partly because the land ownership pattern is such that no practicable method could be devised for an allocation of the requisite number of acres for each well, and partly because the increased cost of spreading pipe lines and production equipment to such scattered wells would make oil- and gas-well operations under such conditions economically prohibitive. Another equally serious aspect of this matter is that oil and gas wells in this territory drilled according to Order M-68 would drain only a fractional part of the oil and gas reserves and there would therefore be an enormous waste of these valuable products."

Tankers Sunk . . .

First appearance of a hostile submarine on the Atlantic Coast of the United States claimed two tankers as its first victims. Thus, coastwise tanker movements have become hazardous operations. This will result in a clamoring for construction of the big 24-inch oil line from the Southwest producing areas to the heavy Eastern consumption centers, that was proposed but dropped last summer. The time may come, when it will be generally wished construction of the line had begun then.

However, despite any apparent desirability of such a crude carrier now, the chances of the line being constructed at this time are probably more remote than last summer. The steel situation has tightened to that extent since the start of the "all out" war preparation program.

And the coincidence of the appearance of the sub off the Atlantic Coast at the time of the Pan-American Conference suggests a desperate effort at "timing" rather than a general plan of attack on coastwise shipping.

Japs Get Junked Holes . . .

Occupation of the island of Tarakan, a short distance off the northeast coast of Borneo, places an additional oil-producing region of the East Indies in the hands of the Japanese, but no more oil. Currently the Balik Papan oil area of Borneo proper is under attack. Tarakan and Balik Papan collectively have something like 900 producing wells that yield about 33,000 barrels per day. The Japs some weeks ago captured the Sarawak fields in western Borneo with about 500 producing wells and 17,500 barrels daily output. Dutch and British forces reported destruction of both Sarawak and Tarakan oil fields, so it is not yet known of what value they may prove to be to the Japanese. The Japs are not long on drilling equipment, and even with plenty of equipment it probably would require years to restore production to its pre-war level.

OPM Revision Due . . .

The new OPM Preference Rating Order P-98 imposes a lot of work on directors of OPC district offices with the provision requiring their counter-signature on all purchase orders before suppliers can accept them.

It seems the appearance of this requirement, with relation to repair and maintenance materials in the approved order surprised several in both OPM and OPC who had helped draft the measure. It is due to be changed, according to word from both OPC and OPM.

One of the best comments we have heard on "M-68" and "P-98" ran something like this:

"The great consolation in "M-68" and "P-98" lies in the fact that are so many needs for revision that they will not stand as now written."

Washington Roundup

Issue industry equipment preference rating order and amend usage order . . . To hasten synthetic rubber development . . . Move to offset Northwest area supply troubles . . . Form state regulatory council . . . Survey natural gasoline plants

By B. F. LINZ, Washington Correspondent

THE blueprint for war operation of the oil industry, the first industry to be completely integrated for defense operation, was completed this week with the issuance by the Office of Production Management of the long-awaited Preference Rating Order P-98 (see page 21), setting up priority ratings for all branches of the oil industry, and the accompanying revision of Conservation Order M-68 (see page 23), in which completion of wells spudded prior to December 23 was assured.

Defense officials, forestalling complaints from the industry, admitted that there may be some bugs in the set-up now established, but gave assurance that these could and would be eliminated as rapidly as they come to light.

During the week, also, OPM brought out an amendment of PD-1, on which equipment suppliers apply for priority ratings for the acquisition of material, extending such ratings to the suppliers and sub-suppliers of the producers to whom the ratings originally are issued.

Second in interest only to the issuance of P-98 was announcement by Jesse H. Jones, Federal Loan Administrator, of plans for the production of synthetic rubber. Approximately half of our 1941 consumption of natural rubber is to be replaced by synthetic within a year; maximum use of reclaimed rubber and the judicious depletion of the stockpile of natural rubber built up last year will assure a supply adequate for defense and vital civilian needs, he announced. Basic material for the synthetic rubber will be oil.

Jones also disclosed contracts with oil companies which will raise the daily output of 100-octane aviation gasoline to 71,300 barrels, close to half of the 150,000-barrel goal of the present program. To further that program, also, OPC ordered a thorough survey of the capacities and possibilities of all natural gasoline extraction, cycling and pressure-maintenance and repressuring plants to increase the production of ingredients for alkylate.

Conferences of representatives of companies operating in the foreign field with the recently created Foreign Petroleum Policy Committee were seen in Washington as preliminary to the drafting of plans for the maintenance of oil supplies for American and Allied forces operating in various sections of the world, to go into effect when American troops are sent into the field.

However, it was thought, the conferences also were directed toward maintenance of supplies for our own and Allied forces now engaged in the Far East.

Issuance of recommendations for February crude production is expected within the week and, it is understood, the new allocations will show a number of changes in state allowables, largely to provide for an increased output of aviation-grade crudes.

Synthetic Rubber

Action designed to hasten the development of a synthetic rubber industry capable of producing 450,000 tons a year was taken during the week by Federal Loan Administrator Jesse H. Jones.

A number of the larger oil companies will join with leading rubber companies in the program, which is estimated to cost $400,000,000.

On the basis of estimates made by Wright W. Gary, director of refining for OPC, production of 240,000 tons of synthetic rubber will involve an output of approximately 225,000 barrels of oil daily.

Jones explained that the program for development of new facilities, as well as expansion of present plants, together with the existing stockpile of some 600,000 tons of raw rubber and more than 1,000,000 tons of used rubber which can be reclaimed and reworked to produce at least 600,000 tons of usable material, will give the country a sufficient supply to provide the 450,000 tons annually required for war needs and vital civilian uses. He did not indicate, however, that any immediate relief from the ban on tires was to be expected.

Production of synthetic rubber will reach about 90,000 tons by the end of this year. Large-scale production is expected to begin about the middle of 1943, with the completion of a number of the new plants projected.

The oil and rubber industries will be encouraged to use their own money in developing the new facilities, but the Reconstruction Finance Corporation is prepared to furnish any or all of the funds needed.

The cost of the artificial product will be approximately 30 cents per pound—about 50 percent above the present cost of natural rubber. Jones said a number of rubber and oil companies will participate in the program, which will involve the pooling of patents and technical skill, but named only Shell Oil Company, Standard Oil Company of New Jersey, Phillips Petroleum Company and Gulf Oil Corporation.

No definite determination of the amount of rubber which will be available for industrial, commercial and civilian use under the developed program is available, but Jones said that before the war United States consumption was between 500,000 and 600,000 tons a year, and last year was approximately 750,000 to 800,000 tons. On the basis of these figures, it would seem that war requirements will take at least 300,000 of the 450,000

tons which it is proposed to produce.

"With care and prudence in the use of rubber for all purposes," he said, "our supply can be made to meet absolutely vital needs until the synthetic program is in production. For the time being, however, there must be a greatly curtailed use and a very strict conservation of rubber by the government and by every individual user."

Technical experts of various oil companies met at the OPC during the week to consider the oil industry's contribution toward synthetic rubber production, which was the subject of extensive discussions at the January meeting of the industry council. The experts approached the problem from the standpoint of the technical questions involved. A major point in the picture is the crude required for rubber manufacture, which is of the same qualities as required for 100-octane aviation gasoline, but it was said there were sufficiently adequate supplies to provide for both products.

Pooling of patents, resources, experience and technical skills by the rubber, petroleum and chemical industries, will make the 400,000-ton goal possible, it was predicted by Dr. E. R. Weidlein, chief of the chemicals branch of OPM.

Major achievement thus far has been development of the program in such a way as to avoid the use of chlorine, widely used in war production and at present insufficient to meet the demand.

Enough raw materials are now in sight for half of the proposed rubber output, Weidlein said. The problem of raw materials for the next 200,000 tons has been discussed with the oil industry, which is studying the matter.

Basic ingredients for the "Buna S" type of synthetic rubber, adopted as standard, are butadiene and styrene, the former a product of petroleum, natural gas, alcohol or acetylene, and the latter a coke industry by-product, coming from benzol. Some 20 other chemicals are needed, but the quantities used are small and present no large production problems, it was said.

If high priority ratings are assigned for the necessary quantities of non-corrosive steel for equipment, the first 200,000 tons of rubber will be in production by January 1, next, the chemicals branch chief estimated.

The necessary butadiene for the next 200,000 tons can be produced as a by-product in the 100-octane gasoline plants now being constructed, without reducing the amount of aviation gasoline produced and without restricting the output of other petroleum products.

If this production is in sight by July of this year, the second 200,000 tons of synthetic rubber can be ready to go into production by mid-1943.

Northwest Supply

Moving to counteract supply difficulties in Oregon and Washington that may result from the diversion of part of the coastwise tanker fleet to war service, Coordinator Ickes on January 16 issued a recommendation (No. 29) outlining the steps to be taken by the industry to meet the situation.

The requirements of the two states are normally supplied by tankers from California. The recommendation was based on the results of an intensive survey of the West Coast supply situation by the marketing committee for district 5 and the OPC, and was directed to that committee, to the Pacific Northwest products subcommittee and to the products subcommittees for Oregon and Washington. Membership of the state sub-committees was announced in California simultaneously with issuance of the recommendation by C. S. Beesemyer, chairman of the district marketing committee, but was not immediately published in Washington.

In the recommendation, Ickes called on the products subcommittee to:

1. To obtain, analyze and keep current all pertinent and available facts, figures and other data with respect to stock inventories and demand for petroleum and petroleum products in the Pacific Northwest.

2. To coordinate, arrange for and carry into effect the sale, exchange or loan of petroleum products among marketers "Wherever and to whatever extent may be necessary to facilitate and assure the distribution of the available supply . . . to meet, in order of statement, the needs of war industries, essential civilian needs and all other reasonable civilian requirements." Arrangements made by the sub-committees must be approved by the chief counsel of the Office of Petroleum Coordinator and are to be placed in effect under direction of the petroleum coordinator or the deputy petroleum coordinator.

3. In cases of an emergency character, where found necessary by the district marketing director and subject to his supervision, to make such temporary arrangements for the distribution and division of incoming supplies and existing inventories among the various marketers in a manner that will "result in the products to meet war, defense and essential civilian demands." A full report on any such action must be filed promptly with the chief counsel, Office of Petroleum Coordinator, by the district marketing director.

4. In the event the foregoing measures should prove inadequate, to devise and submit to the marketing committee for district 5 plans for the accomplishment of the recommendations objectives. Plans may provide for the exchange, loan, sale, lease or pooling of petroleum and petroleum products, and of production, transportation, refining and storage facilities "wherever and to whatever extent may be necessary." Before being carried into effect, any plans would have to be approved by the marketing committee and by the chief counsel, Office of the Petroleum Coordinator.

Commission Council

Formation of a national conference of petroleum regulatory authorities, "for the fullest cooperation between the Federal Government and the oil-producing states in the work of petroleum coordination," was announced by the OPC over the week-end, some days after invitations to participate in the group had been extended to and accepted by the state officials.

Ickes explained that the conference will be composed of members representing the Interstate Oil Compact Commission and those states having official agencies charged with the regulation and conservation of oil and gas production.

Telegrams requesting the designation of representatives to serve on the conference were sent to Govrnor Leon Phillips of Oklahoma, chairman of the Compact Commission, and the conservation officials of Arkansas, Colorado, Illinois, Indiana, Kansas, Louisiana, Michigan, Mississippi, Montana, New Mexico, New York, Oklahoma, Pennsylvania, Texas and Wyoming.

[*Continued on page 40*]

New Orders Give Oil Priority Ratings; Force Unitization

WITH the issuance last week of Preference Rating P-98, setting priorities for materials used in the various activities of all branches of the industry, and an amendment to M-68, providing for the conservation of production materials, the Office of Production Management and the Petroleum Coordinator completed the framework for full conversion of the oil industry's operations to a wartime platform.

After several weeks spent in wrestling with P-98 in an effort to whip it into shape, during which time the industry awaited its issuance amid much confusion, the order was issued January 13, to be effective the following day. Amended M-68 was issued simultaneously.

Views Differ

While OPM and OPC officials held the view that the two orders would keep the industry's drilling and production operations generally on a full-speed basis, due to the granting of priority assistance to every branch, the industry generally had an entirely different view. Feeling within the industry was that the number of wells drilled would certainly decline sharply, due to the stricter provisions for 40-acre spacing, and some felt that the decline would be drastic. Oil men also were of the opinion that the priority ratings granted did not assure that ready delivery of equipment to oil operations could be expected, especially in some branches, after the nation's "all out" scale of war manufacturing attained greater impetus.

Without question, the industry's field operations have been placed under strict government control, with every phase of drilling and completion of wells due to be supervised through regulation of equipment.

With the release of P-98, the final segment of a four-piece pattern was completed, and thus the route was mapped out by which the industry is to both procure and use operating materials. Manufacturers will obtain their materials through application of P-90 order, supply houses will get materials under P-83 applications, oil operators in turn will obtain necessary equipment from supply houses under P-98, and oil operators must use all equipment, both newly purchased and that already in inventory, in accordance with the provisions of Order M-68.

Use of Materials

Conservation Order M-68, originally issued December 23, placed the use of materials for the development of new wells under strict control, prohibiting every operator from acquiring or using materials for production purposes except under specified conditions or by specific authorization from the Director of Priorities.

The amended order issued last week was drafted to eliminate uncertainties and to broaden the original provisions more definitely to carry out the purpose aimed at.

Important in the changes made in M-68 was amendment of paragraph (c) (7) with reference to the drilling, completing and making of additions to wells. The original order required a uniform well-spacing pattern of not more than one well to each 40 acres to comply with the terms, but in the new order a provision was added that "no well shall be drilled unless, prior to the actual commencement of development operations at the designated drilling location of such well, there has been a consolidation of all separate property interests within the appropriate 40-acre area surrounding such designated drilling location."

Paragraph (c)(8), dealing with natural gas fields, is amended similarly to provide for consolidation of interests within the 640 acres

File Certified Report of Wells Drilling December 23

OWNERS of all wells that were spudded on or before December 23 should immediately file a certified copy of their drilling report of date with the nearest District Office of the OPC. This will serve as protection if any question should arise later as to whether the well was drilling on December 23. Under amended Conservation Order M-68, all wells spudded on or before December 23 will be given materials that permit them to be completed.

Tips on Filing M-68 Exception Applications

IN filing application for exceptions to regulations imposed by Amended Conservation Order M-68, it is essential that the industry realize it has a tough job of selling to do. OPM has the final say on all exceptions, although applications are filed with OPC; OPC merely passes applications and their recommendations to OPM. Therefore, the problem is to convince OPM that the oil to be produced will more than offset the desirability of conserving the steel it will require. In other words, you have to trade so many barrels of oil for so many tons of steel.

In filing these exception applications, be sure to present your case in a clear and concise manner, OPM is too busy to give a great deal of time to study of your individual case among the thousands of requests they are getting from hundreds of industries. Exception Forms 214a and 214b require that maps accompany all requests, and these should be firmly and permanently attached to all other data. Otherwise they may become lost. By all means do not mail maps under separate cover. Attempt to have the size of the map in convenient proportions. In other words, do not send maps that are too large.

In setting forth the relationship of your needs to the national defense program, it would be well to stress whenever possible the availability of market outlets and refinery facilities, and also point out if the crude oil has any special characteristics that make it particularly desirable from the military standpoint — such as for aviation gasoline.

which was made the basis for the drilling of a new well.

A new paragraph (c)(9) was incorporated in the amended regulations, providing an exception to the rule in any case where material is to be used for completion or provide surface connections for any well in any discovered or undiscovered oil, gas or condensate field which was actually spudded on or before December 23, last.

OPM officials explained that the amendment of paragraphs (7) and (8) was designed to protect small property interests which might be jeopardized by the well-spacing requirements, while keeping those requirements in effect, and the new paragraph (9) is designed to prevent the waste of material in place or already used in drilling operations.

The importance of the new paragraph (9) was emphasized by Deputy Coordinator Ralph K. Davies in an explanation of the order on behalf of OPC.

"Under the order as originally promulgated," Davies said, "there had been uncertainty among operators as to whether those wells actually spudded on or before that date could be completed or came under the order's restrictions on the use of materials for drilling of wells that do not conform to a uniform spacing pattern. In its amended form, the order eliminates any possibility of unreasonable discrimination against those operators who in good faith commenced actual drilling prior to midnight, December 23.

"Another important amendment requires the consolidation, prior to completion of drilling on any particular spacing pattern, of all separate property interests which fall within that pattern," he added.

"This requirement will make possible the avoidance of situations wherein certain individuals, by urging special exceptions for the purpose of preserving existing leasehold or property interests, might jeopardize the conservation of production materials," he explained. The consolidation provision, he maintained, will make available to all operators opportunities to participate in the production of oil under their respective properties.

"The order also has been clarified," Davies pointed out, "by certain revisions made in paragraph (b) of the order. These revisions make it clear that the use of fuel oil for the continued operation of wells now on the pump is not prohibited by the restrictions of Conservation Order M-68."

Also, he added, the revision of this paragraph makes it clear that there is no prohibition against using pumping equipment already installed on leases as of the effective date of the order, December 23.

Rating Order P-98

Preference Rating Order P-98, assigning the priority ratings for the various activities in the industry, was the complement to M-68 and was originally planned to be issued at the same time. This order, unlike M-68, which is effective until revoked by the Director of Priorities, will apply only until February 28, unless sooner revoked or extended, but this provision is understood merely to give OPM a period in which to study the effects of its operation and make such changes as may be found necessary when the order is continued beginning March 1.

P-98 assigns the highest rating, A-1-a, to deliveries of materials to refiners for use in the repair of equipment when there has been an actual breakdown of operations. This rating, and others of A-2 or higher, may be used only when the materials are not otherwise available, and before they are used specific permission must be obtained from OPM by application through the office of the coordinator, either by mail or wire.

Lower ratings are assigned to deliveries for materials for repair, maintenance and operating supplies used in other branches of the industry. These ratings may be applied by a prescribed endorsement on purchase orders signed by a duly authorized official, but the endorsement also must be countersigned by the director in charge of the nearest OPC district office.

OPM officials explained that the

Outline of All Oil Orders and Forms Issued by OPM

With the issuance of Preference Rating Order P-98, organization of the oil industry's war machinery has been practically completed.

How the industry will operate during the war is depicted in the following outline of the orders and forms issued by the Office of Production Management:

Priorities Regulation No. 1: Establishes provisions and definitions applicable to the operation of the priorities system, applicable to all industries, laying down the general framework for all later priorities orders.

PD-1-A (PD-1 until February 2): Form to be used by operators in all branches of the industry, as well as in all other industries, to secure a preference rating for the purchase of material for any purpose, which can be used as an alternative to other more specialized PD forms.

M-68: Conservation order restricting the use and sale of equipment used in oil production, with supplementary Order M-68-c restricting equipment for the marketing branch.

P-98: Order assigning definite preference ratings for deliveries of materials for various activities in all branches of the industry. This order has no accompanying form and the purchase order of the operator, when properly stamped by the supplier and signed by the operator, is sufficient.

P-19-A: Order covering projects such as extended repairs, construction on a pipe-line or other projects requiring new material from various suppliers, enabling an applicant to make use of one preference rating.

PD-200: Form to be used to secure rating under P-19-A.

P-90: Order permitting manufacturers of oil field and other types of equipment to obtain raw materials needed in the manufacturing process.

PD-25-A: Form to be used by manufacturers for allocations of equipment under P-90.

P-83: Order designed to enable supply houses to obtain material from manufacturers.

PD-82-A: Form to be used by supply houses under P-83.

P-100: For use by supply houses, and also by manufacturers if they do not use P-90, for obtaining materials for repair and maintenance of existing plant equipment.

priority ratings assigned by the order may be used by any operator in any of the designated branches of the industry or by any supplier who delivers materials to the industry in accordance with the procedures outlined in the order; however, the rating may not be applied by a supplier to deliveries of materials which are processed or physically changed by him.

These provisions, it was said, do not affect the operator, who may purchase material and equipment from any source heretofore used — supply house, manufacturer or other — but is designed to eliminate a flood of small orders on steel companies and other basic materials producers. Manufacturers and suppliers who process materials are cared for in preference orders issued last year.

Manufacturers are not mentioned in P-98, as it is a supply house order, and manufacturing firms will continue to use PD-25-A, which enables them to procure on one order materials covering shipments on many.

OPM Views

With the issuance of M-68, P-98 and a third order — M-68-c, which prohibits construction of new facilities or improvement of existing facilities, including filling stations, for the marketing of petroleum or oil products except under specific permission from the Director of Priorities as necessary to promote the war effort —"priority assistance is granted to all of the remaining branches of the petroleum industry from exploration of new fields to distribution by filling stations," OPM declared.

"The orders and the ratings assigned are, of course, subject to modification from time to time by the Director of Priorities as a result of changing conditions or upon recommendations by the Office of Petroleum Coordinator, and additional limitation orders will be issued if necessary to conserve scarce materials."

Since the new orders govern all priority assistance extended to the industry, operators no longer will be entitled to apply preference ratings assigned by General Preference Orders P-43 and P-100, which apply to research laboratories and to general maintenance, repair and operating supplies, it was pointed out.

P-98 "will expedite the flow of necessary materials and supplies to the approximately half-million operators in the oil industry" and was prepared "because it was evident that a general rating would be necessary in order to meet the repair, maintenance and operating requirements, and the essential new production, for some 300,000 marketers, about 180,000 producers, and several hundred refiners and pipeline operators," it was declared by OPC.

With certain exceptions, it was explained, the order, in general, follows the form worked out by OPM in granting blanket priority ratings under Preference Order P-100.

OPC Views

Davies called attention to the penalty provisions, under which violators of any provisions of the order may be prohibited from receiving further deliveries of any material subject to allocation, and may be subjected to possible criminal prosecution.

"Preference Order P-98 is, in effect, a sequel to Conservation Order M-68, which forbids the use of scarce materials," Davies said. "The new order provides the means for the oil industry to get these materials when the purposes are considered justified."

The deputy coordinator explained that the top rating (A-1-a) is provided for the acquisition of material for repair of refinery equipment actually out of service, while A-1-c is provided for the minimum quantity of material necessary to avert actual breakdown.

A rating of A-1-e is provided for material for use by producers exclusively for discovery purposes.

A-2 ratings are assigned in both production and refining for materials to be used in laboratory research for more efficient methods, and also are applied to materials for use by producers for drilling and completion of exploratory wells in new areas; and materials required by refiners as operating supplies; materials to be used for repair of transportation equipment actually out of service.

With these exceptions, all materials required for production, refining and transportation are given A-8 ratings and materials required in the marketing branch are rated A-10.

Davies pointed out that certain restrictions are set up in connection with the granting of ratings.

These restrictions, he said, "forbid the application of ratings to obtain (1) scarce materials where substitute materials are practicable; (2) more material and at earlier dates than necessary; (3) more than a minimum practical inventory; and (4) material for any use which is prohibited or limited in any way by any order issued by the Director of Priorities, other than material to be used in conformity with such order."

For preference rating assistance other than that created by P-98, operators may file application with OPC in Washington, he said.

Extension of Preference Ratings Simplified in Amended PD-1

Amendment of PD-1, on which equipment producers and others apply for priority ratings for the purchase of material, will extend the preference ratings granted producers to their suppliers and subsuppliers by a simple endorsement on purchase orders, it was announced January 13 by the priorities division of the Office of Production Management. The amendment will become effective February 2.

Two new forms of Preference Rating Certificates, PD-1A and PD-3A, will replace the present PD forms for assignment of individual ratings. Use of the new forms will be optional beginning February 2 but will be mandatory on and after March 1.

Form PD-1A which will replace Form PD-1 is a simplified blank to be used in making specific applications for materials or supplies when general preference orders do not provide the required priority assistance. When PD-1A applications are approved by the OPM priorities division, ratings will be assigned on the form itself.

Preference ratings assigned to applicants who use this form may be extended on and after February 2 to suppliers and subsuppliers of the applicant by the prescribed endorsement on purchase orders,

[*Continued on page 39*]

Simplified Outline of Procedure for Obtaining Various Types of Equipment and Material for Production and Pipe Line Operations

In accordance with provisions of Amended Conservation Order M-68 and Preference Rating Order P-98

THE following outline has been compiled by THE OIL WEEKLY to assist operators in following the provisions of Orders M-68 and P-98 in the purchase and use of equipment and materials and is not to be considered an official interpretation of such orders by either the Office of Petroleum Coordinator or Office of Production Management.

Explanation

Equipment and material have been classified in accordance with groupings used by the Director of Priorities in establishing the definitions, exceptions and preference ratings in Orders M-68 and P-98, and an explanation has been given for the use permitted, Preference Rating authorized by P-98 and how the material may be obtained.

Exceptions to Order M-68

Wells started before December 23, 1941: Exception No. 9 to Order M-68 clarifies this situation as follows:

"To any case where Material is to be used by an Operator to complete or provide surface connections for any well in any discovered or undiscovered oil or gas or Condensate Field where such well has actually been 'spudded' on or before December 23, 1941."

In addition to the other exceptions noted in this compilation and where conditions do not apply, provisions have been made in Order M-68 whereby an operator or group of operators can make applications for an exception by filing with the Office of Petroleum Coordinator, Washington, D. C., OPC Forms PD 214a, PD 214b and PD 214c.

Preference Rating Assistance Other Than That Granted by Order P-98

Likewise, any operator engaged in operating a petroleum enterprise may request preference rating assistance for deliveries of material to him by filing with the Office of Petroleum Coordinator applications for preference rating assistance on any appropriate preference rating or project rating application form issued pursuant to the authority of the Director of Priorities.

Restrictions

Preference Rating Order P-98 provides restriction on the use of material obtained under ratings as well as the use of ratings. These restrictions, referred to under each equipment classification in the following outline, are as follows:

Restrictions on Use of Material Obtained Under a Rating

"When an operator has applied a rating authorized by this order, he must use the material delivered pursuant to the rating, or an equivalent amount of material, for the purpose stated in his endorsement. In no event shall any operator use material delivered to him pursuant to a preference rating assigned by this order in violation of the provisions of any conservation order issued by the director of priorities."

Restrictions on Use of Ratings

"(1) Restrictions on Operator. No operator may apply a rating:

"(I) To obtain scarce material the use of which could be eliminated without serious loss of efficiency by substituting of less scarce material or by change of design; or

"(II) To obtain material in greater quantities or on earlier dates than required to enable him to fulfill the authorized purposes for which the rating is assigned; or

"(III) To obtain material in excess of a minimum practicable inventory of such material. Except as provided in paragraph (1) (II), such minimum practicable inventory shall in no event exceed the amount of such material in inventory or stores on December 31, 1940 (or, at the purchaser's option, on the last day of taking inventory during 1940) increased (in no event to exceed an increase of 10 percent) or diminished in proportion as the purchaser's operations necessitating the use of such material have increased or diminished; or

"(IV) To obtain material for any use which is restricted, prohibited or in any way limited by an order issued by the Director of Priorities, other than material to be used in conformity with the provisions of such order.

"(2) From time to time the Director of Priorities may determine that any operator or class of operators is exempt in whole or in part, from the restrictions contained in paragraph (1) (III)."

Additional Copies of This Outline and Orders M-68 and P-98 Available

As a convenience to those desiring additional copies of the Simplified Outline of Procedure and Orders M-68 and P-98 THE OIL WEEKLY has reprinted this material in a handy 12-page booklet (8½ x 11) available at the following prices, postpaid:

Quantity	*Price*	*Quantity*	*Price*
1 to 24 copies, each	$0.50	50 to 99 copies, each	$0.35
25 to 49 copies, each	.45	100 to 200 copies, each	.25

(Prices of larger quantities upon application)

Address THE OIL WEEKLY, Form Dept., 3301 Buffalo Drive, Houston, Texas

PRODUCTION

Geological, Geophysical, Geochemical Materials:

Basis of Use

Exception No. 3 to Amended Conservation Order M-68 provides for material to be used by an Operator exclusively for operations directly involved in the search for and discovery of a previously unknown Pool by means of geological, geophysical or geochemical prospecting.

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-1-E)

How to Obtain Material

Operator's Stocks: Material may be withdrawn from operator's stocks in accordance with "Exception" No. 3 to Amended Conservation Order M-68 cited above.

New Purchases: If material is to be purchased, before applying Preference Rating A-1-E authorized by Preference Rating Order P-98, check *Restrictions on Use of Ratings* shown in the text at beginning of this compilation to determine if purchase complies with these provisions and if so proceed as follows:

(1) Communicate with the Office of Petroleum Coordinator, Washington, D. C., Ref. P-98, giving details on the following:

(a) The material and quantity thereof necessary to effectuate the repair or to initiate or maintain operations.

(b) The supply of the necessary material on hand or available.

(c) The names and addresses of the suppliers from whom the material is to be obtained and the earliest delivery dates assured by any such supplier for delivery of the minimum necessary quantity of material.

The Director of Priorities will notify the operator whether, and to what extent, the application is approved. A copy of such notification to be furnished by the operator to any supplier to evidence the proper rating granted pursuant to the provisions of this order.

(2) Endorse the following statement on the original and all copies of the purchase order or contract for such material *manually signed* by a responsible official duly designated for such purpose:

"Material for.....(state purpose)..... rating in accordance with paragraph (B) (1) (I) ...A-1-E...authorized by Preference Rating Order P-98, with terms of which I am familiar."

(Signed).....
(legal name of operator)

.....
(signature of designated official)

(3) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Research Laboratory Materials:

Basis of Use

Exception No. 2 to Amended Conservation Order M-68 provides for material to be used by an Operator exclusively for carrying out by means of an existing research laboratory investigation into more efficient or effective methods of conducting Production operations.

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-2)

How to Obtain Material

Operator's Stocks: Material may be withdrawn from operator's stocks in accordance with "Exception" No. 2 to Amended Conservation Order M-68 cited above.

New Purchases: If material is to be purchased, before applying Preference Rating A-2 authorized by Preference Rating Order P-98, check *Restrictions on Use of Ratings* shown in the text at beginning of this compilation to determine if purchase complies with these provisions and if so proceed as follows:

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

"Material for.....(state purpose)..... rating in accordance with paragraph (B) (1) (II) ...A-2...authorized by Preference Rating Order P-98, with terms of which I am familiar."

(Signed).....
(legal name of operator)

.....
(signature of designated official)

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Drilling and Well Completion Material:

(Wildcat or Exploratory Wells)

Basis of Use

Exception No. 3 to Amended Conservation Order M-68 provides for material to be used by an Operator exclusively for operations directly involved in the search for and discovery of a previously unknown Pool by the drilling or completion of any Exploratory Well.

An Exploratory well is defined as any well located not less than two miles from any well capable of producing Petroleum.

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-2)

How to Obtain Material

Operator's Stocks: Material may be withdrawn from operator's stocks in accordance with "Exception" No. 3 to Amended Conservation Order M-68 cited above.

New Purchases: If material is to be purchased, before applying Preference Rating A-2 authorized by Preference Rating Order P-98, check *Restrictions on Use of Ratings* shown in the text at beginning of this compilation to determine if purchase complies with these provisions and if so proceed as follows:

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

"Material for.....(state purpose)..... rating in accordance with paragraph (B) (1) (III) ...A-2...authorized by Preference Rating Order P-98, with terms of which I am familiar."

(Signed).....
(legal name of operator)

.....
(signature of designated official)

(2) Obtain the countersignature of the director in

[*Continued on next page*]

Outline of Procedure — *Cont'd*

charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Drilling and Well Completion Material:

(Proven Oil and Gas Fields)

Basis of Use

Exceptions No. 7 and 8 to Amended Conservation Order M-68 provide for material to be used to drill, complete, or provide additions to any well in any discovered or undiscovered oil or natural gas field, other than a Condensate field, where such well conforms to a uniform well-spacing pattern of not more than one single well (in the case of an oil well) to each 40 surface acres, or (in case of a natural gas well) to each 640 surface acres: Provided, that no well shall be drilled unless prior to actual commencement of development operations at the designated location of such well, there has been a consolidation of all separate property interests within the appropriate 40 or 640 acre area surrounding such designated drilling location.

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-8)

How to Obtain Material

Operator's Stocks: Material may be withdrawn from operator's stocks in accordance with "Exceptions" No. 7 or 8 to Amended Conservation Order M-68 cited above.

New Purchases: If material is to be purchased, before applying Preference Rating A-8 authorized by Preference Rating Order P-98, check *Restrictions on Use of Ratings* shown in the text at beginning of this compilation to determine if purchase complies with these provisions and if so proceed as follows:

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

"Material for.....(state purpose)..... rating in accordance with paragraph (B) (1) (V) ...A-8...authorized by Preference Rating Order P-98, with terms of which I am familiar."

(Signed).....
(legal name of operator)

.....
(signature of designated official)

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Production Material:

(Pumping and Artificial Lifting)

Basis of Use

Exception No. 6 to Amended Conservation Order M-68 provides for material to be used for pumping or other artificial lifting to be installed on a well located on any single lease or tract in any field on which lease or tract the number of wells to which pumping or other artificial lifting equipment has been or is to be attached does not at any time exceed an average of one well to every 10 surface acres of that part or parts of such lease or tract as are contained within the productive limits of the field; or to any case where Material is to be used by an Operator for pumping or other artificial lifting equipment to be installed on a well located on any single lease or tract of 10 acres or less in any field on which lease or tract no other wells are located to which pumping or other artificial lifting equipment is attached.

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-8)

How to Obtain Material

Operator's Stocks: Material may be withdrawn from operator's stocks in accordance with "Exception" No. 6 to Amended Conservation Order M-68 cited above.

New Purchases: If material is to be purchased, before applying Preference Rating A-8, authorized by Preference Rating Order P-98, check *Restrictions on Use of Ratings* shown in the text at the beginning of this compilation to determine if purchase complies with these provisions and if so proceed as follows:

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

"Material for.....(state purpose)..... rating in accordance with paragraph (B) (1) (V) ...A-8...authorized by Preference Rating Order P-98, with terms of which I am familiar."

(Signed).....
(legal name of operator)

.....
(signature of designated official)

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Production Material:

(Lease Equipment including: Oil Treating Operations; Salt Water Disposal or Injection Operations; Artificial Water Drive; Gas Drive; Air Drive; Primary Gas Cycling or Pressure Maintenance Operations.)

Basis of Use

Exception No. 5 to Amended Conservation Order M-68 provides for material to be used for lease equipment, including oil treating equipment and salt water disposal or injection equipment, but not including material to be used for pumping or other artificial lifting.

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-8)

How to Obtain Material

Operator's Stocks: Material may be withdrawn from operator's stocks in accordance with "Exception" No. 5 to Amended Conservation Order M-68 cited above.

New Purchases: If material is to be purchased, before applying Preference Rating A-8, authorized by Preference Rating Order P-98, check *Restrictions on Use of Ratings* shown in the text at beginning of this compilation to determine if purchase complies with these provisions and if so proceed as follows:

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

"Material for.....(state purpose)..... rating in accordance with paragraph (B) (1) (V) ...A-8...authorized by Preference Rating Order P-98, with terms of which I am familiar."

(Signed).....
(legal name of operator)

.....
(signature of designated official)

[*Continued on next page*]

Outline of Procedure — *Cont'd*

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Repair, Maintenance and Operating Supplies:

(Production—including all types of drilling and lease equipment)

Basis of Use

Exception No. 1 to Amended Conservation Order M-68 provides for material to be used for the maintenance or repair of the operator's equipment, or required as operating supplies, as these terms are defined below by Preference Rating Order P-98:

"Subject to subparagraph (a), 'Maintenance' means the minimum quantity of material necessary to maintain the sound working condition of equipment used by an operator in and essential to the operation of a petroleum enterprise.

"Subject to subparagraph (a), 'Repair' means the restoration of an operator's property or equipment to a sound working condition when such property or equipment has been rendered unsafe or unfit for further service by wear and tear, damage, destruction or failure of parts or similar causes.

"Subject to subparagraph (a), 'Operating Supplies' means any material which is essential to and consumed in the operation of a petroleum enterprise and which is generally charged to the operating expense account of an operator: provided, that the term 'Operating Supplies' shall not include:

"(I) Material which is physically incorporated in whole or in part into any product of an operator (other than reagents, additives or compounding material) or into any material which an operator manufactures, distributes, sells, stores, or transports; or

"(II) Any material which is to be used as a fuel; or

"(III) Any non-ferrous material which is to be used as packaging supplies.

"(a) The terms 'Maintenance,' 'Repairs,' and 'Operating Supplies' do not include material:

"(I) For the replacement of an item carried on the operator's books as a fixed asset; or

"(II) For the improvement of an operator's property or equipment through the replacement of material in the existing installation, unless the property or equipment which is replaced is beyond economic repair or has been rendered unusable by fire or other hazard or natural cause and is scrapped or junked by the operator effecting the replacement; or

"(III) For additions to or expansion to or expansion of an operator's property or equipment; or

"(IV) Which is of a type which could not be carried on an operator's books under 'Maintenance,' 'Repair,' 'Operating Supplies' or the equivalent in the operator's established method of bookkeeping."

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-8)

How to Obtain Material

Operator's Stocks: Material may be withdrawn from operator's stocks in accordance with "Exception" No. 1 to Amended Conservation Order M-68 cited above.

New Purchases: If material is to be purchased, before applying Preference Rating A-8, authorized by Preference Rating Order P-98, check *Restrictions on Use of Ratings* shown at beginning of this compilation to determine if purchase complies with these provisions and if so proceed as follows:

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

"Material for.....(state purpose)..... rating in accordance with paragraph (B) (1) (IV) ...A-8...authorized by Preference Rating Order P-98, with terms of which I am familiar."

(Signed).....
(legal name of operator)

.....
(signature of designated official)

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

TRANSPORTATION

Pipe Line Material:

(New Construction—Oil and Gas)

Pipe line expansion, extension and new construction with the exception of alterations is handled under special Project Ratings which must be applied for through the Office of Petroleum Coordinator, Washington, D.C., giving such pertinent information as point of origin, terminus, size, capacity, etc., and need to National Defense.

Pipe Line Material:

(Existing Facilities—Oil and Gas)

Definition: Pipe line material is included under "Transportation" in Preference Rating Order P-98 which is defined as:

(I) Except in the case of natural gas, the operation of all petroleum terminal and terminal storage facilities and the operation of all pipe lines and stationary gathering systems for the transportation of petroleum from facilities where petroleum is first gauged to any refining facility and from any refining facility to any marketing facility; and

(II) In the case of natural gas, the operation of all pipe lines and stationary gathering systems for the transportation of natural gas from the well head connection to the initial input meter on any trunk pipe line or to any facility for the processing of natural gas by means of a natural gasoline extraction plant, cycling plant, dehydration plant, or desulphurization plant and the transportation of natural gas from any such processing facility to the first gate valve on the discharge side thereof.

Pipe Line Material:

(Repair of Actual Breakdown)

Basis of Use

Preference Rating Order P-98 provides for material to be used for the repair of the operator's property or equipment when there has been an actual breakdown or suspension of operations and the essential material for effecting the repair is not otherwise available.

Preference Rating— (A-2)

How to Obtain Material

(1) Communicate with the Office of Petroleum Coordinator, Washington, D. C., Ref. P-98, giving details on the following:

(I) Date of actual breakdown or suspension of operations (if applicable);

[*Continued on next page*]

Outline of Procedure — *Cont'd*

(II) The equipment to be repaired and its operating importance (if applicable);
(III) The material and quantity thereof necessary to effecuate the repair or to initiate or maintain operations;
(IV) The supply of the necessary material which the operator has on hand or available; and
(V) The names and addresses of suppliers from whom the material is to be obtained and the earliest delivery dates assured by any such supplier for delivery of the minimum necessary quantity of material.

The Director of Priorities will notify the operator whether, and to what extent, the application is approved. A copy of such notification shall be furnished by the operator to any supplier to evidence the proper rating granted pursuant to the provisions of this order.

(2) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

*"Material for.....(state purpose).....
rating in accordance with paragraph (B) (3) (I)
...A-2...authorized by Preference Rating Order
P-98, with terms of which I am familiar."*
(Signed).....
(legal name of operator)
.....
(signature of designated official)

(3) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Pipe Line Material:

(Maintenance and Repair Other Than Actual Breakdown)

Basis of Use

Preference Rating Order P-98 provides for material to be used for the maintenance or repair of the operator's property or equipment other than material acquired for maintenance or repair purposes in case of actual breakdown or suspension of operations.

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-8)

How to Obtain Material

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

*"Material for.....(state purpose).....
rating in accordance with paragraph (B) (3) (II)
...A-8...authorized by Preference Rating Order
P-98, with terms of which I am familiar."*
(Signed).....
(legal name of operator)
.....
(signature of designated official)

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Pipe Line Material:

(Operating Supplies)

Basis of Use

Preference Rating Order P-98 provides for material to be used by an operator in Transportation which is required as operating supplies. (For definition of Operating Supplies see Repair, Maintenance and Operating Supplies under Production section.)

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-8)

How to Obtain Material

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

*"Material for.....(state purpose).....
rating in accordance with paragraph (B) (3) (III)
...A-8...authorized by Preference Rating Order
P-98, with terms of which I am familiar."*
(Signed).....
(legal name of operator)
.....
(signature of designated official)

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Pipe Line Material:

(Alterations)

Basis of Use

Preference Rating Order P-98 provides material to be used by operators in Transportation in effecting alterations. Alterations are defined by the Order:

"(1) Subject to subparagraph (2), 'Alterations' means any change in the physical arrangements of an existing facility used in refining or transportation which is made for the purpose of increasing the operating efficiency of such facility and which does not involve an expenditure of more than one thousand dollars for material.

"(2) The term 'Alterations' does not include:
"(I) Material to be used as 'Maintenance,' 'Repair,' or 'Operating Supplies'; or
"(II) Any change in the physical arrangements of an existing facility in which the amount of material necessary to effect a proper alteration would ordinarily involve an expenditure of greater than one thousand dollars or in which an ordinary alteration in the facility has been subdivided for the purpose of making available to an operator the provisions of subparagraph (1)."

If material is purchased on ratings authorized by Preference Rating Order P-98, its use must conform to Restrictions on Use of Materials shown in the text at the beginning of this compilation.

Preference Rating— (A-8)

How to Obtain Material

(1) Endorse the following statement on the original and all copies of the purchase order or contract for such material, *manually signed* by a responsible official duly designated for such purpose:

*"Material for.....(state purpose).....
rating in accordance with paragraph (B) (3) (IV)
...A-8...authorized by Preference Rating Order
P-98, with terms of which I am familiar."*
(Signed).....
(legal name of operator)
.....
(signature of designated official)

(2) Obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order endorsed and signed above.

Text of Preference Rating Order No. P-98

Office of Production Management

Part 1041

Covering Production, Refining, Transportation, and Marketing of Petroleum

Section 1041-1 Preference Rating Order. For the purpose of facilitating the acquisition of material for the production, refining, transportation and marketing of petroleum, preference ratings are hereby assigned to deliveries of necessary material upon the terms hereinafter set forth:

(A) Definitions

(1) "Person" means any individual, partnership, association, corporation, or other form of enterprise.

(2) "Petroleum" means petroleum, petroleum products and associated hydrocarbons, including but not limited to natural gas.

(3) "Production" means the discovery, development and depletion of petroleum pools, including without limitation the operation of cycling plants and plants for the extraction of natural gasoline and associated hydrocarbons.

(4) "Refining" means the operation of a plant or plants, other than those specified in paragraph (A)(3) for the production of finished or unfinished petroleum (including but not limited to hydrocarbon oils or gases).

(5) "Transportation" means,

(I) Except in the case of natural gas, the operation of all petroleum terminal and terminal storage facilities and the operation of all pipe lines and stationary gathering systems for the transportation of petroleum from facilities where petroleum is first gauged to any refining facility and from any refining facility to any marketing facility; and

(II) In the case of natural gas, the operation of all pipe lines and stationary gathering systems for the transportation of natural gas from the well head connection to the initial input meter on any trunk pipe line or to any facility for the processing of natural gas by means of a natural gasoline extraction plant, cycling plant, dehydration plant, or desulphurization plant and the transportation of natural gas from any such processing facility to the first gate valve on the discharge side thereof.

(6) "Marketing" means the operation of all stationary facilities, other than those specified in paragraph (A)(5), for the distribution of petroleum (not including natural gas) to service stations or to consumers, including without limitation service stations, substations, bulk plants, warehouses, and wholesale depot.

(7) "Petroleum enterprise" means any facility used in the production, refining, transportation or marketing of petroleum.

(8) "Operator" means any person engaged in operating a petroleum enterprise.

(9) "Supplier" means any person with whom a contract or purchase order has been placed for delivery of material which such supplier has not in whole or in part manufactured, processed, assembled or otherwise physically changed and which is to be used in a petroleum enterprise.

(10) "Material" means any commodity, equipment, accessories, parts, assemblies, or products of any kinds.

(11) Subject to subparagraph (14), "Maintenance" means the minimum quantity of material necessary to maintain the sound working condition of equipment used by an operator in and essential to the operation of a petroleum enterprise.

(12) Subject to subparagraph (14), "Repair" means the restoration of an operator's property or equipment to a sound working condition when such property or equipment has been rendered unsafe or unfit for further service by wear and tear, damage, destruction or failure of parts or similar causes.

(13) Subject to subparagraph (14), "Operating Supplies" means any material which is essential to and consumed in the operation of a petroleum enterprise and which is generally charged to the operating expense account of an operator: provided, that the term "Operating Supplies" shall not include:

(I) Material which is physically incorporated in whole or in part into any product of an operator (other than reagents, additives or compounding material) or into any material which an operator manufactures, distributes, sells, stores, or transports; or

(II) Any material which is to be used as a fuel; or

(III) Any non-ferrous material which is to be used as packaging supplies.

(14) The terms "Maintenance," "Repairs," and "Operating Supplies" do not include material:

(I) For the replacement of an item carried on the operator's books as a fixed asset; or

(II) For the improvement of an operator's property or equipment through the replacement of material in the existing installation, unless the property or equipment which is replaced is beyond economic repair or has been rendered unusable by fire or other hazard or natural cause and is scrapped or junked by the operator effecting the replacement; or

(III) For additions to or expansion to or expansion of an operator's property or equipment; or

(IV) Which is of a type which could not be carried on an operator's books under "Maintenance," "Repair," "Operating Supplies" or the equivalent in the operator's established method of bookkeeping.

(15) Subject to subparagraph (16), "Alterations" means any change in the physical arrangements of an existing facility used in refining or transportation which is made for the purpose of increasing the operating efficiency of such facility and which does not involve an expenditure of more than one thousand dollars for material.

(16) The term "Alterations" does not include:

(I) Material to be used as "Maintenance," "Repair," or "Operating Supplies"; or

(II) Any change in the physical arrangements of an existing facility in which the amount of material necessary to effect a proper alteration would ordinarily involve an expenditure of greater than one thousand dollars or in which an ordinary alteration in the facility has been subdivided for the purpose of making available to an operator the provisions of subparagraph (15).

(17) "Exploratory Well" means any well located not less than two miles from any well capable of production petroleum.

(18) "Pool" means any underground accumulation of crude petroleum or associated hydrocarbon substance, including but not limited to natural gas, constituting a single and separate reservoir or source of supply within a field, area, or horizon whether or not presently discovered or developed.

(B) Assignment of Preference Ratings.

Subject to the terms of this order and of any conservation order issued by the Director of Priorities, the following preference ratings are hereby assigned to deliveries to an operator and to his suppliers of material required for use in a petroleum enterprise:

(1) Production.

(I) A-1-E to deliveries of material, to an operator engaged in production, which is to be used exclusively for operations directly involved in the search for and discovery of a previously unknown pool by means of the by means of geological, geophysical or geochemical prospecting.

(II) A-2 to deliveries of materials, to an operator engaged in production, which is to be used exclusively for

carrying out by means of an existing research laboratory investigations into more efficient or more effective methods of conducting production operations.

(III) A-2 to deliveries of material, to an operator engaged in production, which is to be used exclusively for operations directly involved in the search for and discovery of a previously unknown pool or part thereof drilling and completion of any exploratory well, including but not limited to the drilling of "slim holes."

(IV) A-8 to deliveries of material, to an operator engaged in production, which is to be used for the maintenance or repair of the operators property or equipment or which is required as operating supplies.

(V) A-8 to deliveries of material, to an operator engaged in production, which is to be used exclusively in the development and depletion of any pool, including but not limited to material to be used in facilities necessary to or incorporated in well drilling or well completion operations, pumping or other artificial lifting operations, oil treating operations, salt water disposal or injection operations, artificial water drive, gas drive, or air drive operations, or primary gas cycling or pressure maintenance operations.

(2) Refining.

(I) A-1-A to deliveries of material to an operator engaged in refining, which is to be used for the repair of the operator's property or equipment when there has been an actual breakdown or suspension of operations and the essential material for effecting the repair is not otherwise available.

(II) A-1-C to deliveries of that minimum quantity of material, to an operator engaged in refining, which is necessary to make reasonable advance provisions for averting an actual breakdown or suspension of operations.

(III) A-2 to deliveries of the following materials, to an operator engaged in refining, which are required as operating supplies: acetone, activated alumina, activated silica jell, aluminum paste, aluminum powder, aluminum chloride, ammonia, carbon tetrachloride, chlorine, copper sulphate, crysallic acid, dichlorethyal ether, diethanolamine, ethylene dichloride, foamite, glycerine, hydrochloric acid, hydrofluoric acid, mercury, metal deactivator, (including orthoeresol), methalbutal ketone, methalethyal ketone, methyl alcohol, nitro benzine, phenol, phosphoric acid, potassium bichromate, sodium hypochlorite, toluene, triethanol amine, tripotassium phosphate, trisodium phosphate, and zinc chloride.

(IV) A-2 to deliveries of material, to an operator engaged in refining, which is to be used exclusively in carrying out by means of an existing research laboratory investigations into more efficient or more effective methods of conducting refining operations.

(V) A-8 to deliveries of material, to an operator engaged in refining, which is required as operating supplies, other than material acquired as operating supplies as specified in paragraph (B) (2) (III).

(VI) A-8 to deliveries of material, to an operator engaged in refining, which is to be used for the maintenance or repair of the operator's property or equipment, other than material acquired for maintenance or repair purposes as specified in paragraph (B) (2) (I) or (B) (2) (II).

(VII) A-8 to deliveries of material, to an operator engaged in refining, which is to be used in effecting alterations.

(3) Transportation.

(I) A-2 to deliveries of material, to an operator engaged in transportation, which is to be used for the repair of the operator's property or equipment when there has been an actual breakdown or suspension of operations and the essential material for effecting the repair is not otherwise available.

(II) A-8 to deliveries of material, to an operator engaged in transportation, which is to be used for the maintenance or repair of the operator's property or equipment, other than material acquired for maintenance or repair purposes as specified in paragraph (B) (3) (I).

(III) A-8 to deliveries of material, to an operator engaged in transportation, which is required as operating supplies.

(IV) A-8 to deliveries of material, to an operator engaged in transportation, which is to be used in effecting alterations.

(4) Marketing.

(I) A-10 to deliveries of material, to an operator engaged in marketing, which is to be used for the maintenance or repair of the operator's property or equipment.

(II) A-10 to deliveries to an operator engaged in marketing of material required as operating supplies.

(C) Persons Entitled to Apply Preference Ratings.

The preference ratings hereby assigned may, in the manner and to the extent hereby authorized, be applied by:

(1) Any operator.

(2) Any supplier of material to delivery of which a preference rating has been applied as provided in paragraph (E): provided, however, that no supplier may apply a rating to deliveries of material which such supplier will himself process or physically change.

(D) Restrictions on Use of Ratings.

(1) Restrictions on Operator. No operator may apply a rating:

(I) To obtain scarce material the use of which could be eliminated without serious loss of efficiency by substituting of less scarce material or by change of design; or

(II) To obtain material in greater quantities or on earlier dates than required to enable him to fulfill the authorized purposes for which the rating is assigned; or

(III) To obtain material in excess of a minimum practicable inventory of such material. Except as provided in paragraph (D) (2), such minimum practicable inventory shall in no event exceed the amount of such material in inventory or stores on December 31, 1940, (or, at the purchaser's option, on the last day of taking inventory during 1940), increased (in no event to exceed an increase of 10 percent) or diminished in proportion as the purchaser's operations necessitating the use of such material have increased or diminished; or

(IV) To obtain material for any use which is restricted, prohibited or in any way limited by an order issued by the Director of Priorities, other than material to be used in conformity with the provisions of such order.

(2) From time to time the Director of Priorities may determine that any operator or class of operators is exempt in whole or in part, from the restrictions contained in paragraph (D) (1) (III).

(3) Restrictions on suppliers.

(I) No supplier may apply a rating to obtain material in greater quantities or on earlier dates than required to enable him to make on schedule a delivery rated hereunder or, within the limitations of paragraph (D) (3) (II) below, to replace in his inventory material so delivered. He shall not be deemed to require such material if he can make his rated delivery and still retain a minimum practicable working inventory thereof; and if, in making such delivery, he reduces his inventory below such minimum, he may apply the rating only to the extent necessary to restore his inventory to such minimum.

(II) A supplier, in restoring his inventory to a minimum practicable working inventory, may defer applications of the ratings hereunder to purchase orders or contracts for such material to be placed by him or contract for the minimum quantity procurable on his customary terms: provided, that he shall not defer the applications of the rating for more than three months after he becomes entitled to apply such rating.

(E) Application of Preference Ratings.

(1) The operator or any supplier in order to apply a preference rating to deliveries of material to him must endorse the following statement on the original and all copies of the purchase order or contract for such material, manually signed by a responsible official duly designated for such purpose by such operator or supplier:

"Material for.....
(State Purpose)
rating in accordance with paragraph ....., authorized by Preference Rating Order P-98, with the terms of which I am familiar."

.....
Legal name of operator or supplier.

.....
Signature of Designated official.

Such endorsement shall constitute a representation to the Office of Production Management and the supplier with whom the purchase order or contract is placed that such purchase order or contract is duly rated in accordance with all the provisions and limitations of this order. Such supplier shall be entitled to rely on such representation, unless he knows, or has reason to believe, it to be false. Any such purchase order or contract will be restricted to

material the delivery of which is rated in accordance herewith.

(2) In addition to the requirements of paragraph (E) (1), the operator, (but not a supplier) in order to apply the preference ratings assigned by paragraphs (B) (1) (I), (B) (2) (I), (B) (2) (II), (B) (2) (III) and (B) (3) (I), must communicate with the Office of Petroleum Coordinator, Washington, D. C., Ref.: P-98 supplying in detail the following information:

(I) Date of actual breakdown or suspension of operations (if applicable);

(II) The equipment to be repaired and its operating importance (if applicable);

(III) The material and quantity thereof necessary to effectuate the repair or to initiate or maintain operations;

(IV) The supply of the necessary material which the operator has on hand or available; and

(V) The names and addresses of suppliers from whom the material is to be obtained and the earliest delivery dates assured by any such supplier for delivery of the minimum necessary quantity of material.

The Director of Priorities will notify the operator whether, and to what extent, the application is approved. A copy of such notification shall be furnished by the operator to any supplier to evidence the proper rating granted pursuant to the provisions of this order.

(3) In addition to the requirements of paragraph (E)(1), the operator (but not a supplier), in order to apply the preference ratings assigned by paragraphs (B)(1) (II), (III), (IV) or (V); (B)(2)(IV), (V), (VI) or (VII); (B)(3)(II), (III) or (IV); or (B)(4) (I) or (II), must obtain the countersignature of the director in charge of the nearest district office of the Office of Petroleum Coordinator upon the purchase order which such operator has endorsed and signed pursuant to paragraph (E)(1).

(F) Restrictions on Use of Material Obtained Under a Rating.

When an operator has applied a rating authorized by this order, he must use the material delivered pursuant to the rating, or an equivalent amount of material, for the purpose stated in his endorsement pursuant to paragraph (E). In no event shall any operator use material delivered to him pursuant to a preference rating assigned by this order in violation of the provisions of any conservation order issued by the Director of Priorities.

(G) Exception of Operators from Provisions of Preference Rating Orders Nos. P-43 and P-100.

No operator engaged in operating a petroleum enterprise shall be entitled to apply the preference rating assigned by Preference Rating Orders Nos. P-43 or P-100, and no such operator shall be subject to the provisions of such orders.

(H) Preference Rating Assistance Other than That Granted by the Terms of This Order.

Any operator engaged in operating a petroleum enterprise may request preference rating assistance for deliveries of material to him by filing with the Office of Petroleum Coordinator applications for preference rating assistance on any appropriate preference rating or project rating application form issued pursuant to the authority of the director of priorities.

(I) Records.

In addition to the records required to be kept under Priorities Regulation No. 1, the operator and each supplier receiving any purchase order or contract rated hereunder shall each retain for a period of at least two years, for inspection by representatives of the Office of Production Management, endorsed copies of all such purchase orders or contracts, whether accepted or rejected, segregated from all other purchase orders or contracts or filed in such manner that they can be readily segregated for such inspection.

(J) Communications to Office of Petroleum Coordinator.

All reports which may be required to be filed hereunder, and all communications concerning this order, shall, unless otherwise directed, be addressed to: "Office of Petroleum Coordinator, Washington, D. C., Ref.: P-98."

(K) Violations.

Any person who wilfully violates any provision of this order or who by any act or omission falsifies records to be kept or informed to be furnished pursuant to this order may be prohibited from receiving further deliveries of any material subject to allocation, and such further action may be taken as is deemed appropriate including a recommendation for prosecution under Section 35(A) of the Criminal Code (18 (U.S.C. 80).

(L) Revocation or Amendment.

This order may be revoked or amended at any time as to any operator or supplier. In the event of revocation, deliveries already rated pursuant to the provisions of this order shall be completed in accordance with said rating, unless the rating has been specifically revoked with respect thereto. No additional applications of the rating to any other deliveries shall thereafter be made by any operator or supplier affected by such revocation.

(M) Applicability of Priorities Regulation No. 1.

This order and all transactions affected thereby are subject to the provisions of priorities Regulation No. 1, as amended from time to time, except to the extent that any provision of this order may be inconsistent therewith, in which case such provision shall govern.

(N) Effective Date.

This order shall take effect on the date of issuance and shall continue in effect until February 28, 1942.

(P.D. Reg. 1, Aug. 27, 1941, 6 F.R. 4489; O.P.M. Reg. 3 amended, Sept. 2, 1941, 6 F.R. 4865; E.O. 8629, Jan. 7, 1941, 6 F.R. 191; E.O. 8875, Aug. 28, 1941, 6 F.R. 4483; Sec. 2(A), Public No. 671, 76th Congress, Third Session. As amended by Public No. 89, 77th Congress, First Session Sec. 9, Public No. 783, 76th Congress, Third Session.)

Issued this 13th day of January, 1942.

(Signed) J. S. KNOWLSON
Acting Director of Priorities.

Text of Amended Conservation Order M-68

Office of Production Management
Part 1047

Covering Production Material for the Oil Industry
Amendment No. 1 to Conservation Order M-68

Section 1047.1 (Conservation Order M-68) is hereby amended to read as follow:

(a) Definitions

(1) "Person" means any individual, partnership, association, corporation, or other form of enterprise.

(2) "Production" means the discovery, development, and depletion of Petroleum Pools, including without limitation the operation of cycling plants and plants for the extraction of natural gasoline and associated hydrocarbons.

(3) "Petroleum" means petroleum, petroleum products, and associated hydrocarbons including but not limited to natural gas.

(4) "Operator" means any Person engaged in Production.

(5) "Material" means any commodity, equipment, accessories, parts, assemblies, or products of any kind.

(6) "Exploratory Well" means any well located not less than two miles from any well capable of producing Petroleum.

(7) "Condensate Field" means any condensate, distillate, naphtha, or retrograde Pool or Pools in which the liquid and gaseous hydrocarbons recovered at

the surface occur in a single phase under original reservoir conditions or any gas-cap Pool in which commercial oil occurs in the liquid phase and in which there exists a gas-cap or gas-caps of an appreciable size having the essentiail characteristics of a condensate Pool.

(8) "Pool" means any underground accumulation of crude petroleum or associated hydrocarbon substances, including but not limited to natural gas, constituting a single and separate reservoir or source of supply within a field, area, or horizon whether or not presently discovered or developed.

(b) Conservation of Material Used in Production

Subject to the exceptions in paragraph (c) hereof no Operator shall order, purchase, accept delivery of, withdraw from inventory or in any other manner, directly or indirectly, secure or use Material for construction, reconstruction, expansion, remodeling, replacement, or improvement of facilities used in Production. Subject to the exceptions in paragraph (c) hereof, no Person shall deliver or otherwise supply, or cause to be delivered or otherwise supplied, any Material which he knows, or has reason to believe, is intended for such use.

(c) Exceptions

The provisions of paragraph (b) hereof shall not apply in the following instances:

(1) To any case where Material is to be used by an Operator for the Maintenance or Repair of the Operator's property or equipment or is required as Operating Supplies, as these terms are defined in Preference Rating Order P-98.

(2) To any case where Material is to be used by an Operator exclusively for carrying out by means of an existing research laboratory investigations into more efficient or effective methods of conducting Production operations.

(3) To any case where Material is to be used by an Operator exclusively for operations directly involved in the search for and discovery of a previously unknown Pool by means of geological, geophysical or geochemical prospecting or in the drilling or completion of any Exploratory Well.

(4) To any case where Material is to be used by an Operator exclusively for carrying out secondary recovery operations by means of artificial water drive, gas drive, or air drive operations, but not including Material to be used in Production operations by means of primary gas cycling or pressure maintenance.

(5) To any case where Material to be used by an Operator for lease equipment, including oil treating equipment and salt water disposal or injection equipment, but not including Material to be used for pumping or other artificial lifting equipment.

(6) To any case where Material is to be used by an Operator for pumping or other artificial lifting equipment to be installed on a well located on any single lease or tract in any field on which lease or tract the number of wells to which pumping or other artificial lifting equipment has been or is to be attached does not at any time exceed an average of one well to every 10 surface acres of that part or parts of such lease or tract as are contained within the productive limits of the field; or to any case where Material is to be used by an Operator for pumping or other artificial lifting equipment to be installed on a well located on any single lease or tract of 10 acres or less in any field on which lease or tract no other wells are located to which pumping or other artificial lifting equipment is attached.

(7) To any case where Material is to be used by an Operator to drill, complete, or provide additions to any well in any discovered or undiscovered oil field, other than a Condensate Field, where such well conforms to a uniform well-spacing pattern of not more than one single well to each 40 surface acres: Provided, that no well shall be drilled unless, prior to the actual commencement of development operations at the designated drilling location of such well, there has been a consolidation of all separate property interests within the appropriate 40 acre area surrounding such designated drilling location.

(8) To any case where Material is to be used by an Operator to drill, complete, or provide additions to any well in any discovered or undiscovered natural gas field, other than a Condensate Field, where such well conforms to a uniform well-spacing pattern of not more than one single well to each 640 surface acres: Provided, that no well shall be drilled unless, prior to the actual commencement of development operations at the designated drilling location of such well, there has been a consolidation of all separate property interests within the appropriate 640 acre area surrounding such designated drilling location.

(9) To any case where Material is to be used by an Operator to complete or provide surface connections for any well in any discovered or undiscovered oil or gas or Condensate Field where such well has actually been "spudded" on or before December 23, 1941.

(10) To any case where the Director of Priorities, Office of Production Management, has determined that construction, reconstruction, expansion, remodeling, replacement or improvement of any facility used in production is as to an Operator, or as to any field, fields or area necessary and appropriate in the public interest and to promote the war effort. Application for such a determination shall be made by letter and filed with the Petroleum Coordinator for National Defense, Department of the Interior, Washington, D. C. Information to be submitted in such application shall be in accordance with OPC Form PD-214a, OPC Form PD-214b, or OPC Form PD-214c, issued by the Office of Petroleum Coordinator.

(d) Restriction on Subdivision

No single lease or tract existing as such as of the effective date of this order shall be subdivided or otherwise rearranged for the purpose of making available to any Person the provisions of paragraph (c) (6).

(e) Violations

Any Person affected by this Order who violates any of its provisions or a provision of any other Order or who by any act or omission falsifies records to be kept or information to be furnished pursuant to this Order may be prohibited from receiving further deliveries of any material subject to allocation, and such further action may be taken as is deemed appropriate including a recommendation for prosecution under Section 35 (A) of the Criminal Code (18 U.S.C. 80).

(f) Revocation or Amendment

This Order may be revoked or amended at any time as to any Person. In the event of revocation, deliveries shall be made in accordance with the provisions of any applicable Preference Rating Order without further restrictions, unless such deliveries have been specifically restricted.

(g) Applicability of Priorities Regulation No. 1

This Order and all transactions affected thereby are subject to the provisions of Priorities Regulation No. 1, as amended from time to time, except to the extent that any provision of this Order may be inconsistent therewith, in which case such provision shall govern.

(h) Effective Date

This Order shall take effect on the date of issuance and shall continue in effect until revoked.

(P. D. Reg. 1, Aug. 27, 1941, 6 F. R. 4489; O. P. M. Reg. 3, Amended Sept. 2, 1941, 6 F. R. 4865; E. O. 8629, Jan. 7, 1941, 6 F. R. 191; E. O. 8875, Aug. 28, 1941, 6 F. R. 4483; sec. 2(a), Public No. 671, 76th Congress, Third Session, as amended by Public No. 89, 77th Congress, First Session; sec. 9, Public No. 783, 76th Congress, Third Session.)

Issued this 14th day of January, 1942.

(Signed) J. S. KNOWLSON,
Acting Director of Priorities.

OIL IS AMMUNITION ★ KEEP 'EM PRODUCING

Transportation Has Fostered Southwest Oil Development

By T. E. SWIGART, President, Shell Pipe Line Corporation

THE great Southwest region of the United States, and Texas in particular, is endowed with more than its share of natural wealth, and of this, petroleum and its products are perhaps of greatest importance. The Southwest area is still young in development, however, and its population and consumptive demands are far below its potentialities of production. That the benefits of these fabulous mineral resources may be enjoyed also by the nation as a whole, it is necessary that adequate and economical transportation be available for all manner of products. Transportation methods developed within the petroleum industry have fostered that industry's enormous growth in the Southwest and have enabled the area to serve much of the United States with its petroleum needs.

During the first four decades of the American petroleum industry, crude oil was found chiefly in Pennsylvania and adjoining states which, handily enough, were adjacent to the great centers of consumption.

The turn of the century, however, brought two events that were to influence profoundly the industry's course. These were the invention of the automobile and discovery of the Spindletop field in Texas. The latter event signalled a development of oil reserves and production doubtless beyond the most fantastic dreams of that day. The history of crude oil production in the United States is shown in Table 1. Production of the Eastern States reached its peak before 1900 and by now it has declined to less than 2 percent of the national output. Meanwhile, production in the Southwest has risen from obscurity to 49.3 percent of the 1940 national total of 1⅓ billion barrels.

THE place of pipe line and water transportation in moving crude and refined petroleum and natural gas from Southwestern United States to the markets of the nation and the world are outlined in the accompanying paper. The material, as presented here, has been highly condensed by the editorial staff of The Oil Weekly, from an address before the Houston Chapter of the American Petroleum Institute on January 14, 1942. The original title was "The Place of Pipe Line Transportation in the Development of the Southwest."

Much of the original manuscript dealt with the history and development of pipe lines, but the data presented herewith is limited to the economic phases of the transportation picture of oil and its products from the Southwest. The illustrations and statistical data are of special importance at this time, because of the possibility that war may disrupt the normal transportation routes of petroleum from this great producing and refining region.

The growth of known crude oil reserves, shown in Table 2, has followed a similar trend. Texas alone now has 56 percent of the nation's total of 19 billion barrels, while the Southwestern area has nearly 68 percent; present reserves in the Eastern States are but 1.3 percent. Thus the centers of crude oil production and reserves have moved gradually west and south until Texas and the Southwest today are dominant.

The historical trend of petroleum consumption, as shown by statistics on motor fuel—its best index—has been quite different. The centers of maximum consumption have remained in the Eastern and Northern states. These areas of greatest population and industrial development have continued to be the greatest markets and, moreover, they have proved to be markets with constantly growing demands. The true consumptive demand of the Southwest, while substantial, is only 10 percent of the national total.

Thus the Southwest with enormous reserves and but one tenth of the national demand now supplies about half of the nation's crude oil, whereas the Eastern area with 42 percent of the demand has very limited reserves and can produce only about one fiftieth of its crude-oil requirements.

Despite this shortage of locally produced crude oil, Eastern refineries are equipped to manufacture more than half of the refined products needed by the Eastern states; this is shown in Table 4. Their

TABLE 1
Production History of the United States
(Average barrels per day for the year)

YEAR	Eastern or Atlantic Seaboard (incl. Ohio)	Upper Mid-Continent and Middle West (excl. Ohio)	Southwestern States	Rocky Mountain States	West Coast	Total United States
1859-1875	12,660	.....	.....	.....	.....	12,660
1880	71,910	.....	.....	.....	110	72,020
1890	123,500	200	.....	1,010	840	125,550
1900	145,530	13,760	2,290	880	11,840	174,300
1910	86,350	243,690	43,120	970	200,000	574,130
1920	65,730	453,960	363,240	47,350	283,220	1,213,500
1930	76,730	756,660	941,420	62,670	622,820	2,460,300
1940	79,360	1,093,550	1,824,800	92,610	613,370	3,703,690

Sources: U. S. Department of Commerce, *Petroleum in 1930*, pp. 786-7 (for years through 1930).
American Petroleum Institute, *Petroleum Facts and Figures—1941*, p. 64 (for year 1940).

TABLE 2
Known Crude Oil Reserves of the United States as of January 1, 1941

	Barrels	Percent
Eastern or Atlantic Seaboard (incl. Ohio)	335,376,000	1.8
Upper Mid-Continent and Middle West (excl. Ohio)	2,102,694,000	11.0
Southwestern States*	12,877,576,000	67.7
Rocky Mountain States	417,487,000	2.2
West Coast	3,291,382,000	17.3
Total	19,024,515,000	100.0
*Texas, only	10,623,516,000	55.8

Source: American Petroleum Institute, *Petroleum Facts and Figures—1941*, p. 74.

crude supply necessarily must come from other areas—principally the Southwest. Conversely, Southwestern refineries run about three fourths of the crude oil produced in the Southwest and they turn out a volume of refined products four times as great as their local needs. This excess must go to other areas and it does go principally to the East.

It is of interest that these great disparities in crude oil production, refining capacity, and consumptive demand are not to be found in the other major areas although the tremendous industrial growth in the Upper Mid-Continent and Middle Western states has left them with small deficiencies in oil production, even after taking into account the recent large flush production from Illinois. However, the Middle Western states, the West Coast, and the Rocky Mountain areas are all substantially in balance and the latter two are practically self-contained units.

In summary, then, the Southwest and the East are to a great extent complementary in their supply and demand, and their connecting link is transportation. Because of the distances and the enormous tonnages involved, the cost of transportation becomes an all-important factor in the oil industry's economy and this factor is discussed again later.

Movements in Southwest

Pipe-line maps, Plates I to IV inclusive, show by use of symbols the principal sources of supply, the centers of refinery demand, and the directions of movements of crude oil, refined products, and natural gas in the United States.

Plate I is a crude-oil pipe-line map of the United States. The oil reserves of the several producing states are shown by circles drawn to comparative scale and the principal refining centers by triangles —also to scale. As mentioned earlier, the nation's greatest oil reserves are in the Southwest, while the principal refining centers are scattered over the Pacific Coast; the Gulf Coast at Houston, Beaumont, Port Arthur, and New Orleans; the Mid-Continent (including Wood River, Illinois); the Great Lakes region at Chicago, Toledo, and Cleveland; and the Atlantic Coast at New York, Philadelphia, Baltimore and Boston.

From their inception, the history of pipe lines is one of continuous growth to the vast network which exists today. An unending succession of extensions have been made over the years to provide outlets for the ever increasing number of new fields which have been discovered in the Mid-Continent and Southwest.

During the past 40 years the pipe-line industry of the Southwest has grown to its present mammoth proportions of some 37,500 miles of trunk and gathering lines. About 37 percent of the nation's lines are in this territory. Estimates indicate that pipe-line companies have

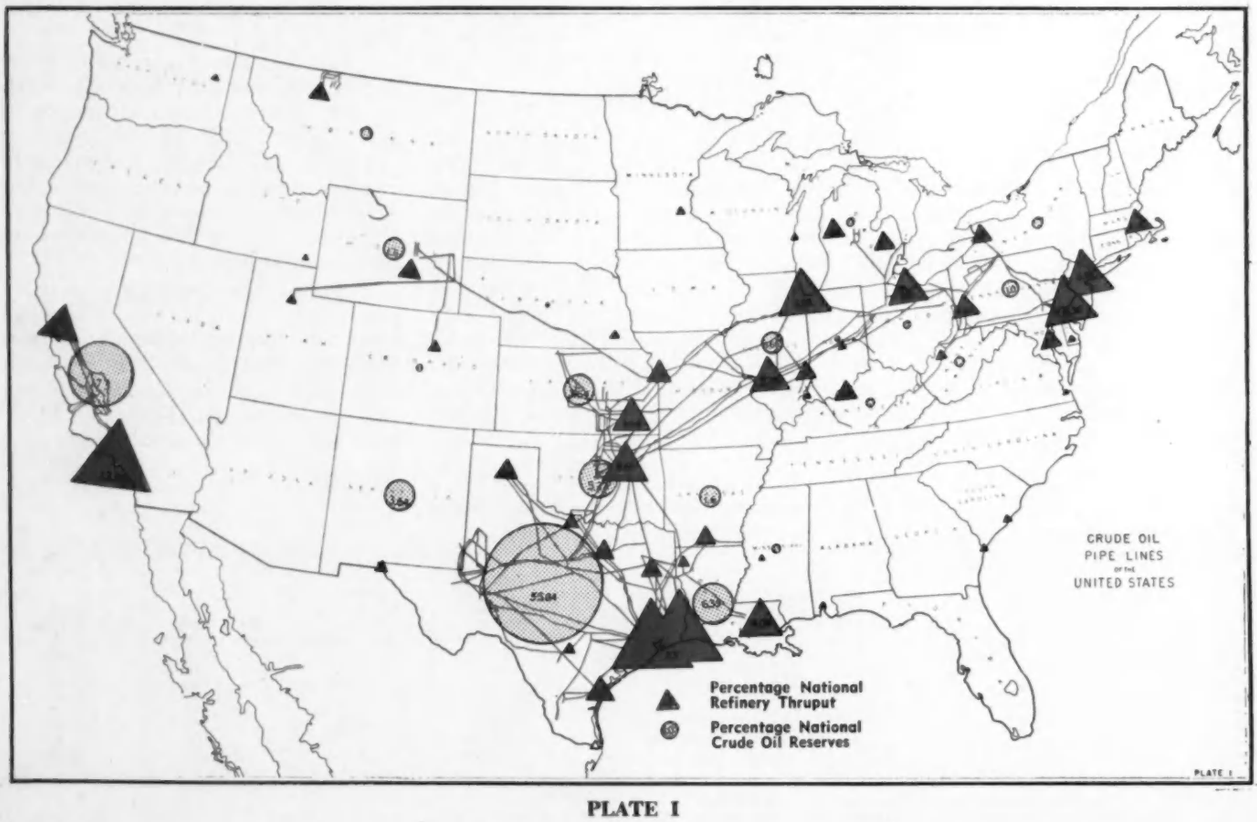

PLATE I

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	FEET	SIZE DRILL PIPE			
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Type 40	4,000	4½"	150 H. P.	4	4
Type 50	5,000	4½"	350 H. P.	6	3
Type 75	7,000	4½"	500 H. P.	6	3
Type 100	10,000	4½"	650 H. P.	6	3
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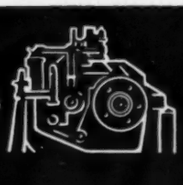
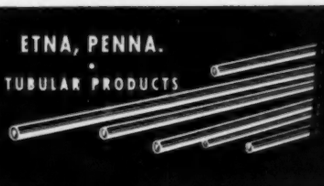


ETNA, PENNA.
•
TUBULAR PRODUCTS



SEVEN PLANTS DEVOTING EVERY USABLE FACILITY TO AMERICA'S VICTORY PROGRAM

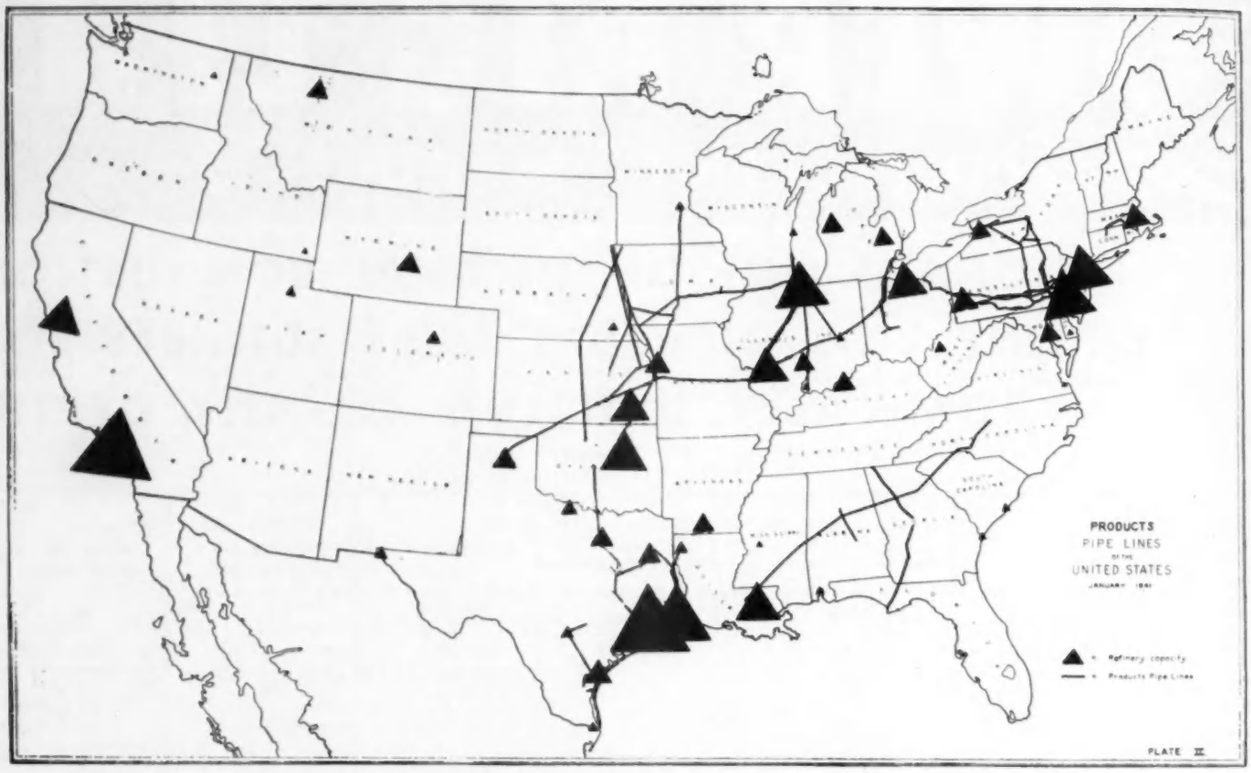


PLATE II

invested about $392,000,000 for transportation facilities in the Southwest; they employ approximately 10,000 men and pay about $18,500,000 per annum in federal, state and local taxes.

Plate I shows the tremendous network of 102,000 miles of crude trunk lines which have been built to handle oil movements within the United States, and it should be studied in connection with Plate IV which is referred to as a "National Crude Oil Movement Map." This movement map shows graphically that of 666,051,000 barrels of crude petroleum produced in the Southwest area in 1940, tankers transported 146,746,000 barrels to the Atlantic Seaboard and only 18,357,000 barrels left the area by pipe line for Mid-Continent and Great Lakes refineries. Except small amounts exported, the remainder was refined in the Southwest. In 1940 practically no crude oil was transported by pipe line from the Southwest to the Eastern area.

By the summer of 1941, the national emergency brought about a definite shortage of tankers, and this was immediately reflected in the movements of crude oil and refined products from the Southwestern states to the Atlantic Seaboard. As this report was prepared during the late part of 1941 and petroleum statistics for that year are not available, it is not possible to give authoritative statistics on crude movements by pipe line from Southwestern states to the East for 1941. However, the tanker shortage did lead to rearrangements and rerouting of movements, with the result that crude pipe lines are now transporting about 45,000 barrels per day of crude from the Southwest to the East. Substantial additional amounts are transported from the Upper Mid-Continent and Middle West to the East by pipe lines, but as indicated by the arrows on the map, these movements are complicated by the many sources of supply and points of consumption (i.e., refineries) along the way.

In summary, inter-area pipe-line movements of crude are substantial, even in comparison to water movements, although the map clearly shows that such movements are confined to interior hauls and in normal times, little crude is actually transported by pipe line in direct competition with tankers.

Plate V is an up-to-date movement map of the Southwest and

TABLE 3
Motor Fuel Consumption in Barrels as an Index of Petroleum Consumption in the United States

YEAR	Eastern or Atlantic Seaboard (incl. Ohio)	Upper Mid-Continent and Middle West (excl. Ohio)	Southwestern States	Rocky Mountain States	West Coast	Total
*1920	38,728,000	42,642,040	8,088,740	3,428,610	10,112,610	103,000,000
1930	158,399,500	131,516,120	35,544,000	9,691,980	44,447,730	379,599,330
1935	181,163,140	140,596,710	39,817,520	11,235,500	49,620,510	422,433,380
1940	243,083,450	190,956,380	59,052,980	16,030,670	64,917,330	574,040,810

Sources: American Petroleum Institute, *Petroleum Facts and Figures—1941*, p. 33 (for 1940).
American Petroleum Institute Department of Statistics (for 1930 and 1935).
U. S. Bureau of Mines, *Minerals Year Book—1935*, p. 750 (for 1920).

* Consumption by districts in 1920 calculated on ratio of district registrations to total United States registration of all passenger cars and trucks. The latter source furnished by Houston Chamber of Commerce and taken from Bureau of Public Roads, Department of Agriculture.

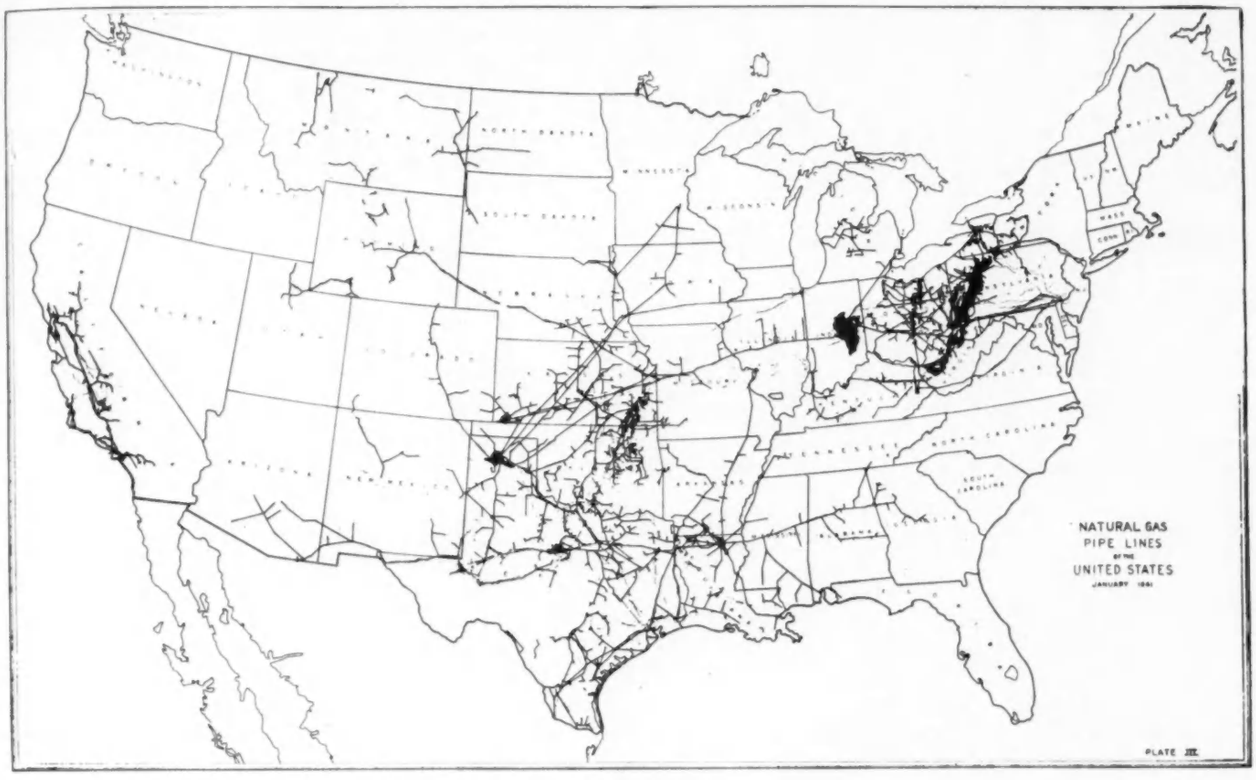
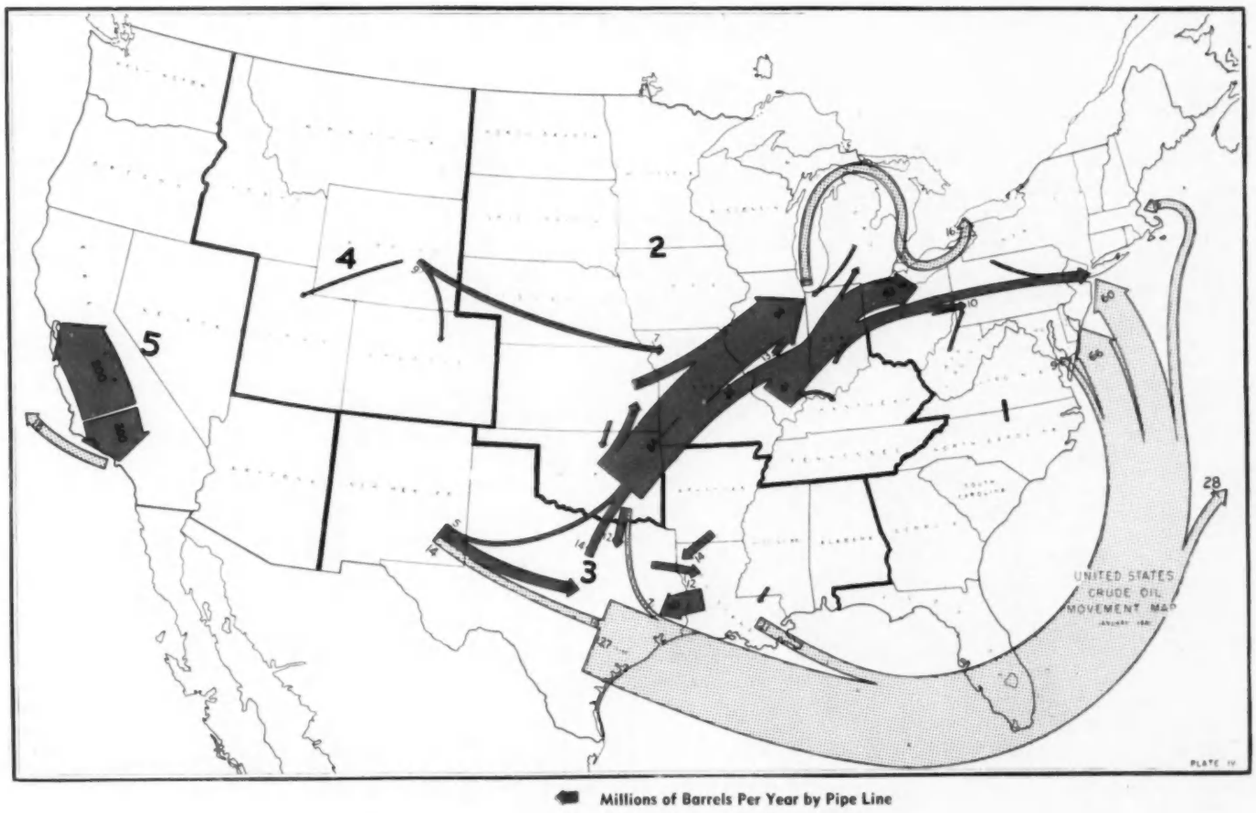


PLATE III



Millions of Barrels Per Year by Pipe Line

Millions of Barrels Per Year by Tanker

PLATE IV

TABLE 4
Comparison of Crude Oil Reserves, Production, Refinery Runs, and Motor Fuel Consumed in Various Districts of the United States

	Eastern or Atlantic Seaboard (incl. Ohio)	Upper Mid-Continent and Middle West (excl. Ohio)	Southwestern States	Rocky Mountain States	West Coast	Total
Reserves as of 1-1-41:						
Barrels	335,376,000	2,102,694,000	12,877,576,000	417,487,000	3,291,382,000	19,024,515,000
Percent	1.8	11.0	67.7	2.2	17.3	100.0
Production in 1940:						
Barrels per day	79,360	1,093,550	1,824,800	92,610	613,370	3,703,690
Percent	2.1	29.6	49.3	2.5	16.5	100.0
Refinery Runs in 1940:						
Barrels per day	800,780	825,270	1,291,670	77,510	550,750	3,545,980
Percent	22.6	23.2	36.5	2.2	15.5	100.0
Motor Fuel Consumption in 1940:						
Barrels	243,083,450	190,956,380	59,052,980	16,030,670	64,917,330	574,040,810
Percent	42.3	33.3	10.3	2.8	11.3	100 0

Sources of Reserves, Production, and Consumption cited in Tables 2, 1, and 3.
Source of Refinery Runs: American Petroleum Institute, *Petroleum Facts and Figures—1941*, p. 103.

shows in larger scale, pipe-line development and crude movements as of July, 1941. Movements of oil from the main sources of supply such as West Texas, East Texas, Gulf Coast, and so on, to refineries and terminals are shown by the arrows drawn to comparative scale. The network of pipe lines connecting fields and refineries is likewise shown. As can be seen from the map, with the exception of some movements on the Intracoastal Canal and Gulf, practically all crude movements within the Southwest are by pipe line. The large arrow in the Gulf depicts the shipments of crude from Gulf ports; these averaged 371,000 barrels per day in July, 1941. Shipments on the Intracoastal Canal—mostly in Southern Louisiana—averaged 69,000 barrels per day and although substantial, were only 5 percent of the oil handled in the Southwest by pipe line.

Bare reference will be made to Plate II which shows oil products pipe lines of the United States. At the outset it should be pointed out that the refining centers, whilst ordinarily destinations for crude lines, are points of origin for products lines. As inland refineries in the Southwest are scattered to serve their natural geographical areas and the large refineries on the Gulf Coast are designed chiefly to serve the Atlantic Seaboard by water transportation, products pipe line development in the Southwest has been relatively slow. In fact, the Phillips 8-inch gasoline line from the Panhandle to St. Louis, together with three or four other short lines, comprised the products pipe line development of the Southwest at the end of 1940.

In the past, all refined products destined for the Atlantic Seaboard have been carried by tank ship, but in 1941 there were some tank car movements as a result of the tanker shortage. This position will soon be somewhat further affected by the Southeastern pipe line, which has just been completed, and the Plantation line, which is nearing completion. Both of these lines are designed to serve parts of the Southeastern states. The Southeastern line transports refined products delivered to it by tank ship or barge at its point of origin, Port St. Joe, Florida, to points inland as far as Chattanooga, Tennessee. The Plantation line originates at Baton Rouge, Louisiana, is 1260 miles long, and terminates at Greensboro, North Carolina. Neither of these lines reaches the heaviest consuming centers of the East but both serve strategic industrial areas and will reverse important flows of refined products from the Atlantic Coast to the interior and thus will save tanker space.

TABLE 5
Cost of Transporting Petroleum by Various Forms

FORM OF TRANSPORTATION	HAUL From	HAUL To	Rate in Cents per Bbl.*	Approx. Length Haul—Miles	Rate in Mills Per Bbl. Mile	Ratio
Before Emergency:						
Tanker	Gulf	Bayonne	29.9†	2,000	1.5	1.0
Pipe Line	W. Tex.	Chicago	45.5	1,300	....	....
	Okla.	Chicago	34.5	800	....	....
	Okla.	Gulf	25	560	....	....
	Okla.	Pittsburgh	69.7	1,280	....	....
	Pipe Line Average		....	....	4.4	2.9
Rail (tank car)	E. Tex.	Bayonne	204.0	1,700	12.0	8.0
Present—During Emergency:						
Tanker	Gulf	Bayonne	40.0	2,000	2.0	1.0
Pipe Line	W. Tex.	Chicago	38.0	1,300	....	....
	Okla.	Chicago	30.8	800	....	....
	Okla.	Gulf	20.0	560	....	....
	Okla.	Pittsburgh	46.0	1,280	....	....
	E. Tex.	Bayonne	67.5	1,700	....	....
	Pipe Line Average		....	....	3.6	1.8
Rail (tank car)	E. Tex.	Bayonne	134.0	1,700	7.9	4.0

* These figures were developed by comparing rates for long hauls.
† Composite of rates for shipments from Gulf Ports to Bayonne from 1936 to 1940, inclusive.

Natural Gas Reserves

The principal natural-gas systems and some of the outstanding sources of natural gas in the United States are shown on Plate III. Again because of the limitations of this paper, only mention will be made of this industry, which is worthy of more exhaustive treatment. The largest known gas reserves of the Southwest are in the Panhandle and Gulf Coast fields of Texas and in Northern Louisiana. The great natural gas systems of the Southwest serve not only local markets but they transport gas from these areas to the industrial centers of the Central, Middlewestern, and Southern states. One line carries gas as far east as Ohio, another eastward to Georgia, and still another northward to Minneapolis.

Known gas reserves of the Southwest are estimated to be about 30 trillion cubic feet. The average daily consumption of gas from the fields of the Southwest

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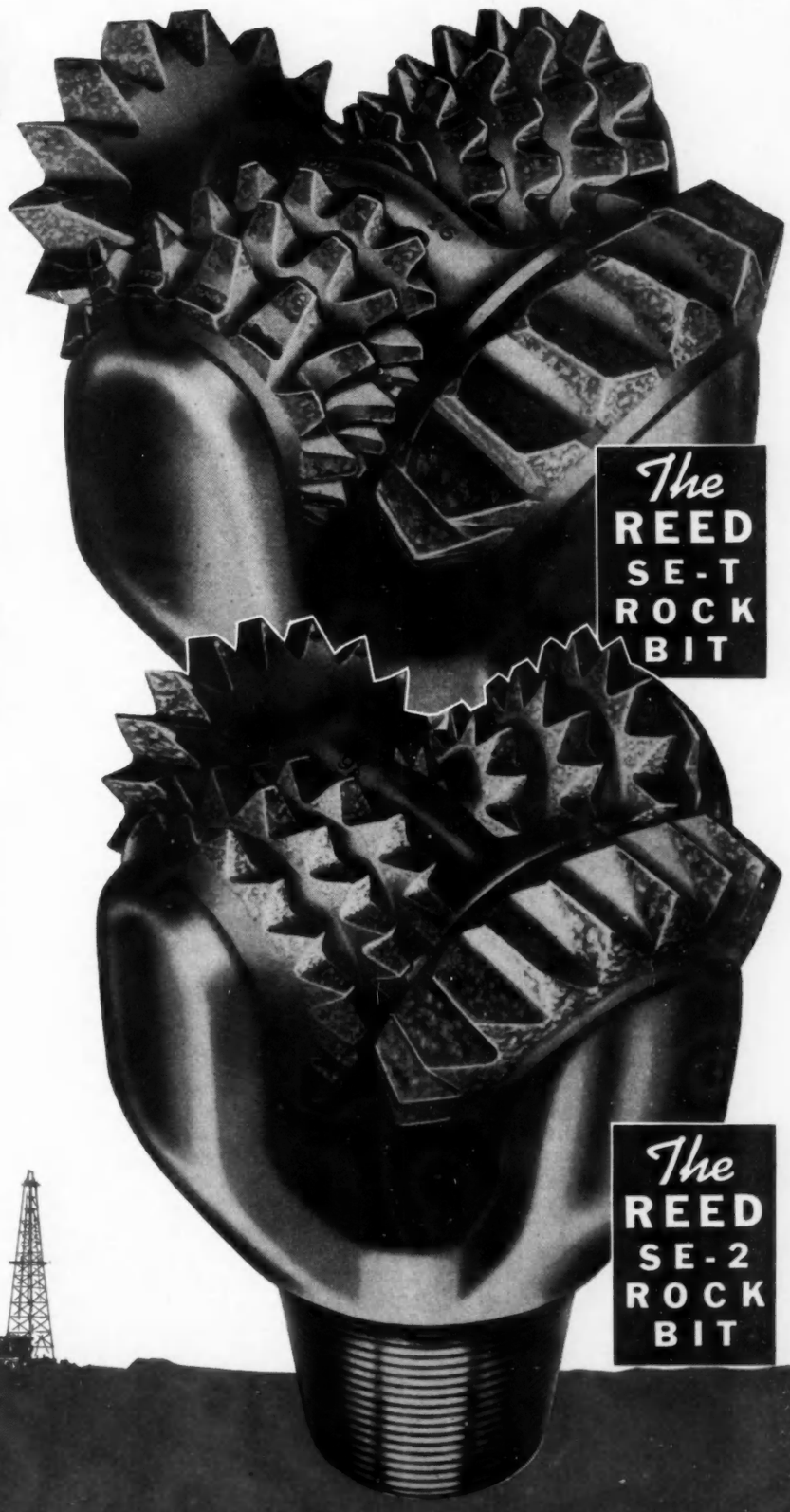

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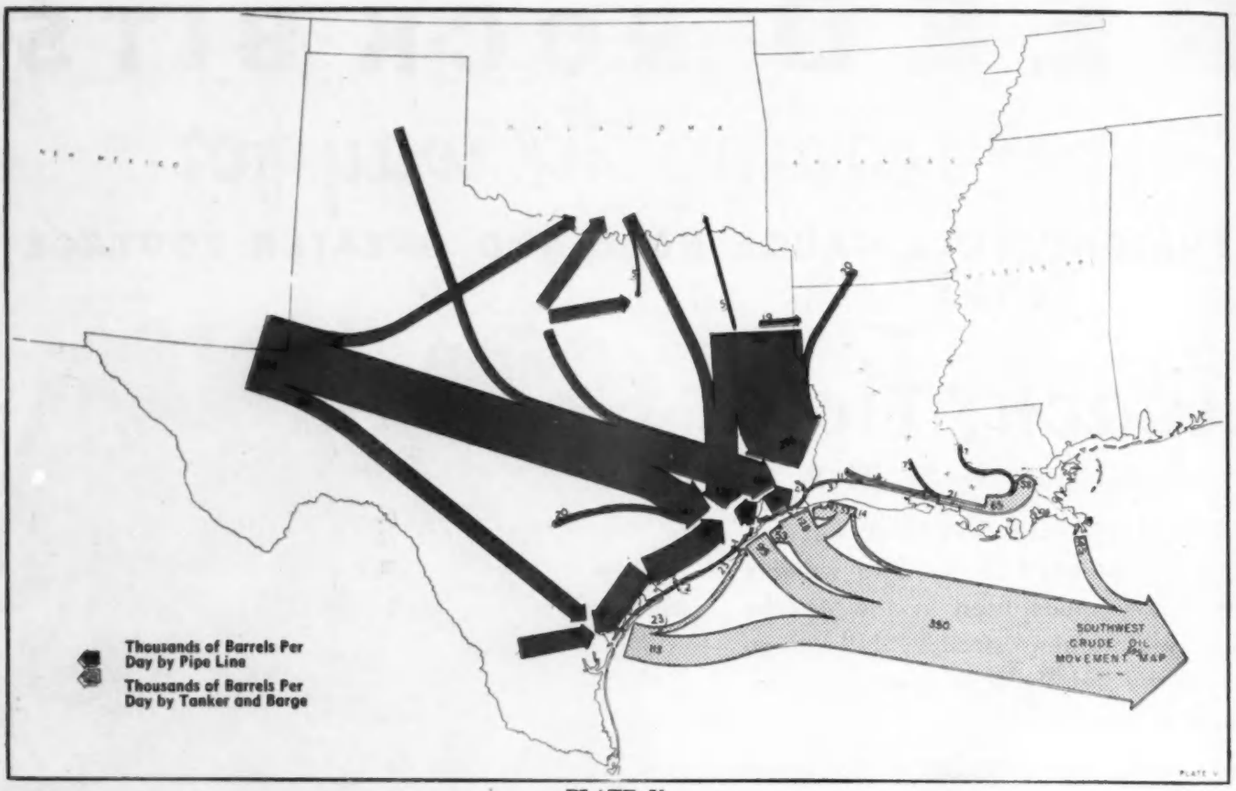

Thousands of Barrels Per Day by Pipe Line
Thousands of Barrels Per Day by Tanker and Barge
SOUTHWEST CRUDE OIL MOVEMENT MAP

PLATE V

is 4 billion cubic feet, and of this amount about one fourth is transported from the Southwest to other areas for domestic and industrial consumption. Approximately 190,000 miles of gas trunk and distributing lines comprise the network of systems shown on Plate III.

Cost of Oil Transportation

Seagoing tankers are the most economical carriers of crude oil and refined products from the coastal ports of Texas and Louisiana to ports on the Atlantic Seaboard. Pipe lines, being the cheapest of overland carriers, are generally used for transporting crude from interior fields to refineries and loading docks and are being used more and more for long interior movements of refined products.

Table 5 gives some interesting comparisons of the cost of transporting petroleum and its products over long distances, as measured by published tariffs and recognized rates.

It should be mentioned that abnormal factors resulting from the European war caused great fluctuations in tanker rates. For several months the Gulf-to-Bayonne rate was stabilized at 50 cents per barrel. On December 1, 1941, the commission reduced this rate to 40 cents per barrel. As a result of tanker shortage and public demand, drastic rail rate reductions on crude and refined oil were made in August, 1941. Pipe-line rates have been steadily declining over a period of years. It is interesting to observe that the composite long-haul pipe-line rate of 4.4 mills per barrel has declined since 1939 to 3.6 mills per barrel-mile and this rate is now 80 percent higher than the long-haul tanker rate. Lastly, it should be pointed out that the familiar ratio of 1:3:8 as between tanker, pipe line, and rail rates, has now been reduced to 1:1.8:4.

Comparative barge and truck figures for long hauls unfortunately are not at hand, but where suitable water-ways are available it is accurate to state that barge transportation is generally as cheap or cheaper than pipe line. Truck transportation is so expensive as to make it non-competitive with other forms except over comparatively short distances, or where time and location are governing factors.

The costs of pipe-line transportation vary greatly with conditions. As in other forms of transportation, short hauls are likely to be more expensive than long ones (on a unit basis), and the qualities of oil handled—particularly their viscosities—and the size and number of tenders of different oils that may be batched in a line, all bear upon the cost of transportation.

The outstanding factor in cost, however, is throughput. Most crude-oil lines do not operate at maximum capacity over long periods. They are built to serve oil fields, which vary in output throughout their lives. Pipe lines usually deliver to refineries directly or through supplemental carriers, and the demands of refineries also vary both seasonally and otherwise because of changing demands made upon them by their particular customers. Considering, then, that large pipe-line systems tap many fields and are thus in competition for business in almost every field, and that they generally serve more than one refinery, it is obvious that full-capacity operation is usually a fortuitous coincidence.

There is a marginal point in the operation of each pipe line beyond which increased throughput adds but little more than the cost of the additional fuel or electric power required to pump the extra oil; consequently every pipe-line operator strives to keep his line running as near full capacity as possible. Most profit is made on the oil which can be handled above the marginal cost or at the "bare cost of pumping."

Industry Given Big Task In Rubber Program

By J. V. HIGHTOWER, Staff Writer

ANNOUNCEMENT last week by Jesse H. Jones, Federal Loan Administrator, of the program to expand production of synthetic rubber to 400,000 tons per year by the middle of 1943 at a total investment of $400,000,000 makes it certain that the American oil refining industry will soon be in the midst of a large expansion program to make the raw materials for this essential product. Jones indicated that among the companies participating are Standard Oil Company (New Jersey), Shell Oil Company, Gulf Oil Corporation, Sinclair Refining Company, and Phillips Petroleum Company. The strong prospect that war in the Pacific may temporarily cut the United States off from over 95 percent of its supplies of natural rubber has hastened the development of oil refining as a vital factor in the rubber industry.

Confirmation was obtained last week from an official of one of the large oil companies interested in the field that the investment figure disclosed by Jones is a good estimate. The figure represents an estimate of the total investment cost all the way from construction of refining equipment to make the raw materials to the processing plants that must be built. The estimate is equivalent to $1,000 per ton of rubber per year. Completion of the expansion program is expected in a little over a year.

Current Output

Last year the output of synthetic rubbers totaled about 12,000 tons, and production this year may reach 70,000 tons. Jones estimated that by the end of 1942 the country's synthetic rubber capacity should be around 80,000 tons yearly. Inasmuch as the consumption of all types of rubber last year was 750,000 tons, and considering the fact that the nation's present supply is good for only around a year, a stoppage of imports from the Far East would fall heavily on the oil industry, which is likely to produce the major share of raw materials used in synthetic rubber. E. R. Weidlein, head of the chemicals branch of OPM, has declared that the new program will avoid the use of chlorine and concentrate on manufacture of Buna rubbers, the raw materials of which will come largely from the refineries.

EVENTS relating to rubber have been moving swiftly during the past ten days. Japanese successes in the Malay States have put a new light on the picture. What appeared to be merely a wartime shortage of rubber a month ago, now appears to be a prospective shortage for a decade. If the British and Dutch are not successful in their scorched-earth policy with reference to rubber trees, we may be well assured that when the Japs are driven out they will complete any damage which the British and Dutch may have failed to do.

Thus our economy faces a long period of rubber shortage — a shortage which will have a great effect on American war effort, American industry and American domestic life. In other words, that which appeared to be a wartime emergency becomes even a long-time peace emergency. Its ultimate effect on the natural rubber industry may be tremendous.

For these reasons THE OIL WEEKLY asked John V. Hightower, its New York editorial staff man, to develop the facts on the rubber situation with particular emphasis on synthetic rubber made from petroleum products. He was asked to consult with authorities on this subject in the oil industry. The accompanying article is the result of this assignment.

The oil refining industry, it was learned from an authority on synthetic rubbers, is entirely capable, with sufficient expansion of equipment, to meet any anticipated demand for these synthetics, since the petroleum products used in their manufacture are present in abundance. The primary problem is securing materials to make new equipment. The Buna rubbers consist to a large extent of polymerized butadiene, which can be amply provided from butylene, a gas by-product from cracking operations. Depending on conditions under which the butylene is processed, the yield of butadiene ranges from 35 to 75 weight percent.

Butylene may be obtained from the cracking of either petroleum oils or natural gas. The quantities of oil or natural gas needed to make it, depend on the temperature, pressure and time to which these materials are subjected in refinery processes. A favorable factor in the synthetic-rubber program, it was learned, is that production of aviation gasoline will not be appreciably affected.

The Buna rubbers are not the only ones capable of being made from refinery materials. Ameripol and chemigum are also made from butadiene. Butyl rubber utilizes olefin gases produced in large quantities in refinery cracking operations, particularly those employing low pressures. Refineries may be called upon to make styrene, which is an ingredient of Buna S along with butadiene. Styrene is made principally from benzol and ethyl alcohol, but the alcohol could be replaced, if necessary, with ethylene gas, another refinery by-product. Neoprene rubber is not one of those for which the refineries will furnish raw materials, being composed basically of acetylene processed to form chloroprene.

The extent to which tires and tubes will utilize the suitably qualified synthetic rubbers will depend both on the rate at which production will be expanded and on the future availability of natural rubber. At present, the higher cost of synthetics and their limited production have kept these rubbers out of commercial use, though they have been used in tires to a certain extent. However, as the domestic supply of natural rubber dwindles, and particularly if imports continue to be shut off, the synthetics will be used in increasingly larger proportions with new and re-

claimed natural rubber and eventually may replace natural rubber entirely. There is no doubt that the best qualified synthetic rubbers are equal to and in some respects superior to the natural product. Furthermore, a particularly favorable factor is that as their production is expanded the cost of manufacture per pound will drop.

On the subject of cost, F. A. Howard, president of Standard Oil Development Company, declared in the Havard Business Review last fall. "Efforts directed to the cheap production of rubber from oil and natural gas have already been moderately successful. These basic raw materials in crude form average in cost less than 1 cent a pound. It is theoretically possible that they might be converted into butadiene, the primary raw material for Buna, at an expense comparable with other well developed processes for the chemical conversion and refining of oil products. As a far distant goal we might therefore reasonably look at an ultimate cost of the finished product below 10 cents a pound."

Dependable Substitute

With respect to adaptability of synthetic rubbers to major current needs, research has shown that many of these materials are thoroughly satisfactory as replacements for natural rubber. Such products as Buna S and neoprene can be vulcanized and are satisfactory as adjuncts to natural rubber in tires and tubes. Buna N, because of its high resistance to gasoline, oil and many organic solvents which attack natural rubber, is well adapted to making hose and fuel lines. The Buna and neoprene rubbers, whose production last year constituted about 90 percent of the total synthetic production of some 12,000 tons, have been proved in road tests. Butyl rubber, differs from the Buna types in that it consists largely of olefins rather than butadiene, is vulcanizable but is considered less adapted to tire making than to manufacture of chemically-resistant tank linings.

The war is certain to create a great demand for the synthetic rubbers to make products other than tires and tubes. Such qualities as superior resistance to solvent action of oils, gasoline, gases and organic solvents give these materials a favored position in the manufacture of balloon coverings, fuel lines for airplanes and tanks, leak-proof fuel tanks and gas masks. Much synthetic rubber is being used in manufacturing industries because the higher cost of the material is more than offset by its superior lasting and performance qualities.

A Plan to Meet Civilian Requirements of Rubber

By JOSEPH E. POGUE and NORMAN D. FITZGERALD
Department of Petroleum Economics
The Chase National Bank of the City of New York

Supplies of rubber for civilian use have been cut drastically as a result of the possible cessation of imports of crude rubber from the Far East, and it seems probable that this condition will persist as long as control of access to the great rubber plantations of British Malaya and the Dutch East Indies is not assured. A crude rubber stock pile representing approximately a year's supply has been built up and this accumulation will doubtless be supplemented by occasional shipments. This inventory, however, is reserved for military and essential uses, and the expected output of the large synthetic plants now projected is similarly earmarked. Ultimately it may be necessary and practicable to allot some of the synthetic output to general consumption, but for two years at least civilian needs must apparently be satisfied with existing tires, reclaimed rubber, and small quantities of certain grades of natural rubber from the Western Hemisphere.

About 75 percent of our requirements go into the manufacture of tires and tubes for automotive vehicles and it is in this classification that restrictions will be felt most widely. The problem of retaining the full benefits of motor car usage will become progressively more serious and complex as our tires wear out unless steps are taken in advance to meet the issue.

The difficulties created by the unavailability of crude rubber for general automotive use are very real although not as immediate perhaps as popularly apprehended. A large number of considerations lead to the conviction that the inventory of available tire mileage is quite large and capable, if properly managed, of sustaining operations at a fairly high level for a considerable period. Existing tires on vehicles have an estimated future life of 12,000 miles or about 1⅓ years and much more with care and reduced speeds. Large numbers of partly worn casings not now on vehicles are available. Marginal mileage will be fully utilized and recapping can be made to extend useful tire life several years.

Expedients will keep a large percentage of cars on the highways in 1942, but retreading and recapping must be made widely available next year to sustain the use of automobiles without substantial impairment. This supporting factor can be assured only if a cooperative program for the full utilization of scrap rubber is adopted by the oil and rubber companies with government consent.

The difficulty is probably temporary and, therefore, should be met by provisional measures, because the war effort at this time cannot permit the diversion of crit-

ical materials to build plants for the manufacture of rubber for general use.

The stock of used rubber disseminated throughout the country in the hands of consumers or in discards appears to be the principal source of rubber available to stretch the mileage of tires in use. The exact quantity is not known but has been estimated to be at least 1,000,000 tons, and the quantity of rubber required to recap a tire is only one third of that needed to make a new tire, so that a ton of reclaimed rubber can provide more than twice the mileage available from a ton of new rubber in the form of new tires. Conservation of the rubber now in circulation is the prime problem and a program directed to this end would be highly practical.

Reclamation of Scrap

Reclamation of scrap rubber could be accelerated by advancing the price, which is now frozen at about one third the price of new rubber. A mark-up to a level coinciding with one half to two thirds the price of new rubber should be authorized to create a stronger incentive to reclamation. But this factor alone would not be adequate to bring about the prompt collection and centralization of adequate material. The burden of constructing reclaiming plants must fall on the rubber companies, but the oil companies with filling stations in every hamlet and in continuous contact with the public should be willing and able to sponsor a comprehensive program of scrap-rubber collection and purchase in the interest of all concerned. Such a scheme might be tested on a statewide basis to obtain data and perfect the technique for a nation-wide effort.

Joint action of oil and rubber companies with government cooperation would be necessary to accomplish satisfactory results. The program could best be implemented through the medium of appropriate technical, marketing, and advertising committees formed for the purpose.

American Sources

A broader and longer-range program should also be instituted, looking to the potentialities inherent in natural rubbers from the Western Hemisphere, such as guayule from Mexico and wild rubber from Brazil. Inter-American cooperation might be enhanced by requests for information on past output and future possibilities in these areas, with action stimulated by the posting of appropriate bounties guaranteed for a minimum number of years. Production from these secondary sources of supply would be small for a year or two, but conceivably could be of real aid in supplementing other sources.

Such a program of reclamation and stimulation of secondary supplies would not obviate the eventual necessity for obtaining natural or synthetic rubber for civilian use, because reclaiming and recapping are limited by the fact that casings will not last forever, rubber can be reclaimed only about three times, and the supply of scrap, although large, is not inexhaustible. Full utilization of the expedients suggested, however, would provide time for a reappraisal of the entire problem and enable the more accurate calculation of the time when natural or synthetic rubber must be available to sustain operations, whereupon a supplementary program of synthetic production or other measures could then be considered.

Reclaiming plants cost only about one tenth as much per ton of capacity as synthetic rubber plants, but the dilution of scrap rubber with fillers and softeners requires the processing of two tons to yield the equivalent of one ton of raw rubber, thus raising the investment cost to one fifth that of synthetic output. This ratio provides a rough measure of the impact that such plans would have upon the war effort. A substantial proportion of existing reclaiming equipment, however, is operating below capacity and the output of reclaimed rubber might be advanced as much as 40 percent above 1941 levels without new construction.

Priority assistance would have to be obtained to get the materials necessary for new reclaiming plants and recapping equipment, but the modesty of such requests in relation to the gains to be effected and the spirit shown by all in depending primarily upon civilian effort to meet civilian needs, should carry important weight in gaining favorable consideration.

Amended PD-1

[*Continued from page 15*]

signed by a duly authorized representative of the company making the extension, and will not require a countersignature from any government officer. Heretofore, preference ratings assigned on PD-1 forms have not been extendable under any circumstances.

When an individually rated order is served upon a supplier by the original applicant under this new procedure, the rating may be extended by the supplier, his suppliers and subsuppliers to obtain any material which will be delivered to the original applicant in accordance with the rating, but neither the applicant, his suppliers or subsuppliers may use the rating to obtain machinery or capital equipment which they use in fabricating parts to fill the order. If producers who have been assigned a rating on a PD-1A form need machinery or capital equipment for this purpose which they cannot obtain without priority assistance, they must apply for a separate preference rating on another PD-1A form.

Another important change made by the regulation allows the recipient of an individual rating, his suppliers and subsuppliers to employ the rating for replacement in inventory of materials used in filling the rated order, provided such replacement does not increase inventories above a practicable working minimum.

If the materials to be replaced are in whole or in part manufactured, processed, assembled or otherwise physically changed by the supplier, the rating must be extended while the materials are in process of fabrication. For materials which are not processed or otherwise changed by the supplier, extension of the rating may be deferred up to three months, until an order can be placed for the minimum quantity procurable on customary terms. This provision is primarily for the benefit of wholesalers and distributors, enabling them to group their own orders while making deliveries in small quantities.

Washington Roundup

[Continued from page 12]

Regular meetings of the conference are to be held in Washington, Ickes said, "to consider the many petroleum problems that directly affect the production and conservation policies of the various states." Date for the first meeting, however, will not be set until organization of the group is completed.

One of the first major problems to come before the organization will be that of increasing production from fields yielding crudes suitable for aviation gasoline, in the light of its effect on production from fields yielding lower-grade crudes and on state conservation and other policies.

It is expected that California production will be increased to enable the state to meet the added burden imposed upon it by war in the Pacific.

Washington officials dealing with oil matters are increasedly concerned over the future supply situation as administration programs make it increasingly evident that all the resources of the industry will have to be devoted to production of war needs.

The situation is particularly serious on the East Coast, where the diversion of tankers as a result of the war again threatens a transportation shortage, and keen regret is being expressed over the failure of plans for construction of the proposed Texas-New York pipe line.

How many tankers have been switched to other runs is a military secret, but it is not unlikely that the Pacific coastwise fleet has at least been doubled.

Restrictions on publication by newspapers and periodicals of information which might be of aid to the enemy, issued this week by Byron Price, director of censorship, prohibit publication of any information regarding the location, movement or identity of naval or merchant vessels of the United States or its allies, or of the transportation of war materials, including oil tank cars.

Survey

A comprehensive survey of the capacities and possibilities for expansion of all natural-gasoline extraction, cycling and pressure-maintenance and repressuring plants was ordered by OPC January 14 as part of its program to increase the production of butane, isobutane and isopentane in the field so that alkylate for aviation gasoline can be manufactured there.

The canvass is to be made by the recently - established district natural gas and natural gasoline committees, which are instructed to "obtain, compile and analyze all pertinent and available facts, figures and data with respect to the extraction, production, sale or disposition of butane, isobutane and isopentane" by all types of plants.

"Such survey," it was emphasized, "should include, without limitation, information concerning the number, type and location of such plants, the present daily capacities of such plants and the possibilities of expansion thereof, the percentage and amount of butane, isobutane and isopentane extracted from the gas processed at such plants, the percentage and amount of butane, isobutane and isopentane saved and sold during the calendar year 1941 at or by such plants."

In addition, operators of all such plants were instructed to file a report with OPC in Washington within 30 days, showing the terms of existing contracts and agreements relating to the sale or other disposition of the three products, either as free products or as they may be included in any other product, and were called upon to increase their production to the maximum quantity economically possible.

Chairmen of the five district committees met January 14 with Paul Raigorodsky, chief of the OPC natural gas and natural gasoline section, and more briefly with Coordinator Ickes, for a discussion of the problems which they are to deal with.

The group talked over questions of organization and procedure, heard an explanation of the priorities situation, and canvassed the questions of maintenance of adequate natural-gas reserves and the elimination of bottlenecks in deliveries to pipe lines.

The survey of plants ordered by OPC was discussed at length, and the chairmen were instructed to begin their studies immediately upon return to their districts, where they are to establish offices.

Aviation Gasoline

Contracts for aviation gasoline entered into by the Defense Supplies Corporation will bring the Administration's 100-octane program close to half of its 150,000-barrels-a-day goal.

The contracts, announced by Federal Loan Administrator Jesse Jones, January 15, were made on the recommendation of the Secretaries of War and Navy and the oil coordinator with Standard Oil Company (New Jersey) and Magnolia Petroleum Company, covering their entire expanded output.

The contract with Standard Oil Company (New Jersey) provides that the company will increase its production from its present 16,000 barrels a day to 37,000 barrels, involving additional plant facilities which will cost approximately $50,000,000. Defense Supplies Corporation will advance $14,400,000 of that sum, to be repaid in gasoline. The purchase contract runs for three years after completion of the new facilities, with an option to DSC for a two-year extension. The corporation will pay 13 cents per gallon for the first year and 12 cents thereafter.

Magnolia Petroleum Company's production is to be increased from 3,000 to 12,000 barrels a day, through new plant facilities costing approximately $15,000,000 of which DSC will advance $4,500,000. This also is a three-year contract with option for a two-year extension, with the government to pay 13 cents per gallon for the gasoline. The loan is to be repaid in gasoline.

These contracts, with that previously entered into with Cities Service Oil Company for production of 1,300 barrels of 100-octane gasoline daily, will bring the total daily output to approximately 71,300 barrels, it was said.

Amendments to Recommendation No. 16 (aviation gasoline), designed to simplify and speed up administration, have been announced by OPC. The major changes eliminate the requirement that terms of contracts and agreements with respect to production of gasoline, base stocks and blending agents be filed with OPC, and provides that notice of action taken with respect to production or storage need not be given in advance but may be filed subsequently.

Both changes were designed to eliminate delay in increasing production and storage.

Foreign Oil Policy

Industry and government officials got together in Washington January 13 to develop a program for companies operating in the foreign field to maintain adequate petroleum supplies for United States and Allied armed forces.

The conference was the first step taken to that end by the Foreign Petroleum Policy Committee recently created by Vice President Henry A. Wallace as chairman of the Board of Economic Warfare at the instructions of the President.

The committee, presenting the different agencies of the government having a vital interest in foreign petroleum problems, including the State, War and Navy Departments, the Maritime Commission, the Petroleum Coordinator and the Board of Economic Warfare, "will provide a central place for joint consideration of the foreign oil problems coming up from day to day," Wallace explained.

To cooperate with the board, American and Allied companies engaged in foreign trade have formed a Foreign Petroleum Operating Board composed of Robert Colley, president of The Atlantic Refining Company; H. D. Collier, president of Standard Oil Company of California; J. F. Drake, president of Gulf Oil Corporation; W. S. Farish, president of Standard Oil Company (New Jersey); H. M. Herron, president of California-Texas Oil Company; G. S. Walden, chairman of Standard-Vacuum Oil Company; J. A. Brown, president of Socony-Vacuum Oil Company, and W. S. S. Rodgers, president of The Texas Company.

A number of subcommittees have been appointed by the industry to carry out the many phases of operation, and the Secretary of State will invite representatives of the British and Dutch governments to work with the group.

The administrative machinery which has been established, it was declared, "is sufficiently flexible to meet any changing world conditions as they arise."

Suit

In an unannounced move, the Department of Justice this week was reported to have withdrawn its charges against some 48 subsidiaries of major companies named in the all-industry trust suit pending in the District of Columbia Federal Court.

The action was taken to simplify matters by reducing the number of attorneys involved in the litigation, in which 22 major companies, a large number of subsidiaries and affiliates and the American Petroleum Institute were named as defendants.

The suit was filed September 30, 1940. Some efforts have been made to reach a consent decree settlement, but difficulties were encountered because of the wide diversity of interests involved.

Charges in the complaint filed by the department were comprehensive, and included allegations regarding major-company control of pipe lines, some of which with respect to rebates were disposed of in a consent decree settlement of the Elkins Act suits December 23.

Bonuses Out

Discontinuance of all bonuses and other devices to increase posted prices for East Texas and other oil was ordered by the Office of Price Administration last week, as a device which might tend to initiate an inflationary spiral of prices.

Asking purchasers to discontinue the practice, Administrator Leon Henderson declared that bonus or other payments evaded the "request" that prices be maintained at their November 7, 1941, level.

"In normal times," he said, "the offering of bonuses or other forms of premium to attract business away from competing buyers usually forecasts a general raise in prices for crude. Under war conditions this type of buying can only serve to contribute to an inflationary spiral.

"My request that crude-oil buyers pay no more than the prices that prevailed on November 7, 1941, applied to posted prices. The effect of bonus offers or other deals which bring the total cost to the buyer above the November 7 posted prices must be considered as an evasion of my request. I ask all crude purchasers to adhere to the posted prices and cease all premium offers."

Henderson's policy of keeping crude prices down, which was the subject of extended discussion at the meeting of the industry council January 6 and 7 culminating in the setting up of a subcommittee to study "ways and means of increasing the reserves of oil and prevent the premature abandonment of smaller wells," has been the subject of sharp criticism in the industry.

The subcommittee, headed by O. D. Donnell, president of The Ohio Oil Company, Findlay, Ohio, as chairman, is composed of Frank Buttram, Oklahoma City, president of the Independent Petroleum Association (who sponsored the resolution); J. Frank Drake, Pittsburgh, president of Gulf Oil Corporation; Walter Hallahan, Pittsburgh, president of Plymouth Oil Company; William F. Humphrey, San Francisco, president of Tide Water Associated Oil Company; John M. Lovejoy, New York, president of Seaboard Oil Company; Charles P. McGaha, Wichita Falls, president of the National Stripper Well Association; Lawrence Van der Leck, Los Angeles, president of the Oil Producers Agency of California; and H. C. Wiess, Houston, president of Humble Oil & Refining Company.

Tanker Rates

A schedule of petroleum product and port differential rates, based on the 40 cent basic rate for transportation of gasoline in tankers approved November 27, was issued by the Maritime Commission January 16, to apply to the movement of oil from Gulf or Caribbean ports to East Coast ports.

The rates represent an average overall reduction of about 18 per cent from those in effect prior to November 27 and are equivalent to the 40 cents a barrel rate for gasoline for a complete voyage, Port Arthur-New York-Port Arthur, it was said.

Appointment

J. W. Carnes, vice president of Consolidated Oil Corporation, has been appointed chairman of the marketing committee for District No. 1, succeeding H. W. Dodge, vice president of The Texas Corporation, who has resigned to accept a federal position.

The appointment also was announced of James E. Pew, Charleston, West Virginia, former superintendent in charge of production, construction, design and maintenance of natural gasoline plants for the Virginia Gasoline & Oil Company, as assistant to Paul M. Raigorodsky, chief of the natural gas and natural gasoline section of OPC.

Practical Operating Hints for

THE practical operating hints for the drilling rig and production man, appearing in these features each week, are secured from oil fields everywhere and offer suggestions that will help to improve field efficiency and safety. The items give an excellent picture of the remarkable ingenuity being exercised by the operating divisions of the industry. Contributions to these features will be paid for at the rate of $5 for each illustrated item accepted. Address contributions to "The Editor, THE OIL WEEKLY, Houston."

1. MUD HANDLING

Skid-mounted Shaker with Bypass Opening Permits Quick Change of Stream Direction

Built-in ditch with dual flow gates on shale shaker skid enables flow to be directed to shale pit or mud ditch without shift of heavy outside equipment.

MOUNTING the shale shaker on a skid with the end section of the mud ditch, and with the shaker at right angles to the ditch, one operator provides a bypass for mud from the shaker simply by moving an extension of the timber ditch up to the fixed portion, setting the end of the trough into the recess provided for it, and switching the end gate (normally used for diverting flow), so as to block the ditch opening and to leave free the run to the extended ditch.

Two cross braces of the skid frame support the extension ditch, and align it with the dovetailing section at the end of the shaker mounting, so that any slight leak in flow after a switch is made is soon caulked by the action of the mud and a tight channel thus provided.

2. LINE CARE

Guard Rail for Catline Speeds Pipe Handling

WHEN running pipe valuable seconds are lost and extra effort wasted every time the catline man must leave his post to stoop over and pick up the line, thrown free at the completion of each cycle of operations.

To eliminate this lost time, Grace & Woods, at their operations in the K-M-A field, utilize a simple rack of one-inch pipe, bent to form a support or standard holding the line at hand level, and attached to the catline roller so as to form an end to maintain the line over the support.

Pipe loop clears derrick floor and aids speedy handling of line in running pipe.

Bent into a flattened loop, this support is carried in two holes bored into the derrick floor during the time the line is being used, it being easy to lift the loop and stack it at the railing or elsewhere out of the way when the derrick floor must be cleared.

A variation of this rack included the welding of two short spurs or projections of sucker rod at the ends of the lateral section, these serving as keepers or guards to retain the line over the support, and to eliminate the need for tying to the vertical roller. Such a device is provided with flat footings, or carries collars to permit the supporting holes in the derrick floor to be drilled through the planking and afford surface enough to retain the support without other bracing.

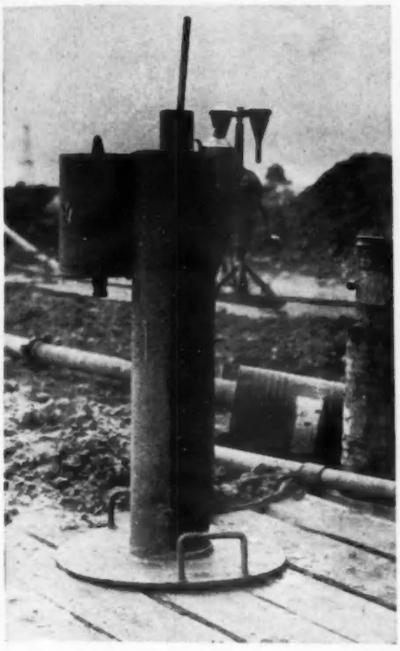
3. TESTING

Unitized Mud Set-Up Speeds Analysis

A COMPACT mud testing apparatus may be erected near the rig for running tests on the drilling fluid. This tester combines all paraphernalia in a single unit, expediting movement when changing locations and simplifying tests.

A four-foot joint of 7-inch casing is welded vertically in the center of a circular base of ⅜-inch steel plating. To opposite sides of the base, handles are welded to allow lifting by catline or by hand. The vertical pipe which constitutes the stand is cut longitudinally down one side to provide an elongated window to allow reaching inside. A round plate is welded to seal off the top of the upright, and through its center a hole is cut for lowering and welding a 2-foot piece of 2½-inch pipe, which is also sealed at bottom by a plate which is equipped with a valve for draining mud samples. The pipe provides a container into which the samples

THE DRILLING RIG . . .



Welded unit provides for routine checks without transfer to dog house or floor.

are poured to obtain density readings.

A small shelf of flat steel is provided at one side for placing various mud containers, while on the end of the shelf is a centrifuge for obtaining shakeouts. Welded to the principal container and parallel to it is a 16-inch section of 7-inch casing, sealed at bottom with a plate, but also provided with a drain for emptying the device. This container is provided to obtain viscosity tests.

4. RIGGING UP

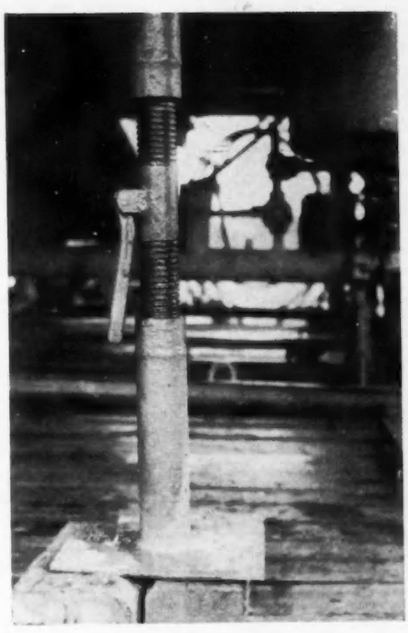
Standpipe Adjustment Through Screw Jack

ONE operator uses screw jacks to lift various devices and to support them at a desired level. One such jack is placed under the standpipe to absorb the load and vibration, distributing the full weight to the wooden floor under the derrick.

A typical jack is made principally of rolled steel. A bar of this material, two inches in diameter and five feet long, is threaded with right and left hand threads at opposite ends. Six inches in the middle are unthreaded. Welded to the center of this section is a handle which includes a hinged lever that hangs vertically when not in use to offer minimum obstruction. For manipulating jack, the handle is raised perpendicular to the bar to furnish rotating leverage.

Bottom and top lifting sections are of 2½-inch pipe each equipped with a rolled steel bushing at one end. The bushings are threaded internally to conform with the corresponding threaded sections of the bar, and are tapered for welding on the end of a joint of 2½-inch tubing two feet long. A steel plate eight inches square is welded to the bottom of the lower section, and a curved saddle suitable for supporting pipe is welded to the upper. Beneath the jack, blocks may be placed to lift the device to the approximate height and to distribute weight of its load.

Rotation of the bar by means of the handle alters height of the supported structure by changing distance between the base and saddle. When the jack is lowered, the bar, being smaller than the inside diameter of the pipes, is withdrawn into the sleeve to reduce the spread.



Heavy threads in long nipples sustain load and relieve floor of pump pound.

5. PUMP SETTING

Mud Hose Connection Suppresses Vibration

ONE operator uses 10-foot rubber hose for connection between several pieces of heavy equipment, replacing the ordinarily rigid pipe connections with some which are readily adaptable for joining with other apparatus. As portions of this equipment are unwieldy due to size and weight, a time saving in erecting the rig is the result, as many pieces do not have to be in perfect alignment for full operating efficiency. A dual purpose is realized by the flexible joints in absorption of vibrations and pulsations which wear out rigid joints and transmit additional loads on the machinery.

Lines leading from the water storage tank to the feed-water pumps, and lines from the preheaters to pumps are provided with such connections. Perfect alignment is unnecessary in order to receive maximum efficiency, and use of hoses effects considerable saving of time in making connections. The rubber segments are provided at each end with flanges for joining contingent apparatus.

Pulsations and possible equipment shifts are absorbed by shirt section salvaged from rotary mud line with consequent gain in rigging and shift time demand.

Why Mission "A H

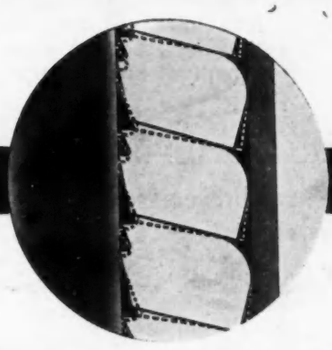
MISSION EXTRA-LONG ROTARY SLIPS (shown below) safely handle the longest, heaviest strings of pipe. The extra large gripping area assures complete protection from bottlenecking of any string of pipe that can be run.

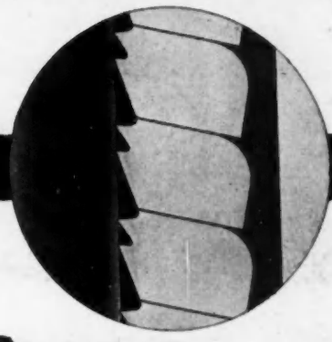
There's a size and style of Mission "Rolling Dog" Slips to suit your needs. See your Composite Catalog for full details.

Find out, as thousands of other operators the world over have done, just how much time and trouble these slips save you. Order a set from your supply store today. Mission Manufacturing Co., Houston, Texas. Export Office, 30 Rockefeller Plaza, New York.

"Rolling Dog" Slips HANDLE PIPE FASTER

POSITIVE GRIP

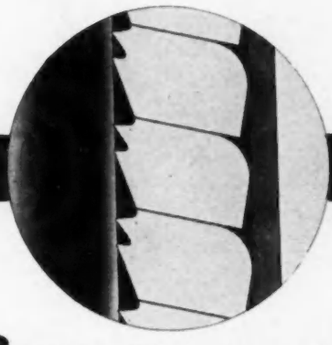


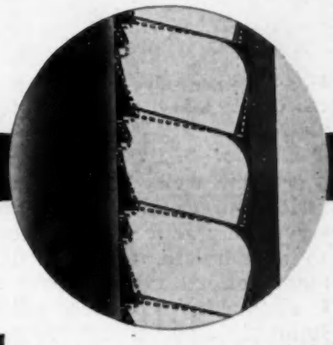


1 WHEN SLIPS ARE DROPPED IN BOWL, the Dogs roll upward slightly . . . Notice how the Mission tooth design insures positive gripping even after teeth are worn.

2 WHEN LOAD IS BEING TAKEN BY SLIPS, the Dogs roll downward to grip the pipe firmly . . . This positive gripping saves much time usually lost in trying to make ordinary slips hold.

INSTANT RELEASE





3 NOW SLIPS ARE SUPPORTING PIPE: The small, non-continuous dog teeth grip the pipe firmly with minimum damage. These teeth give exceptionally long life.

4 NOW LOAD IS BEING TAKEN OFF SLIPS: Notice how the dogs roll upward and away from the pipe — releasing the pipe and freeing the slips from the bowl.

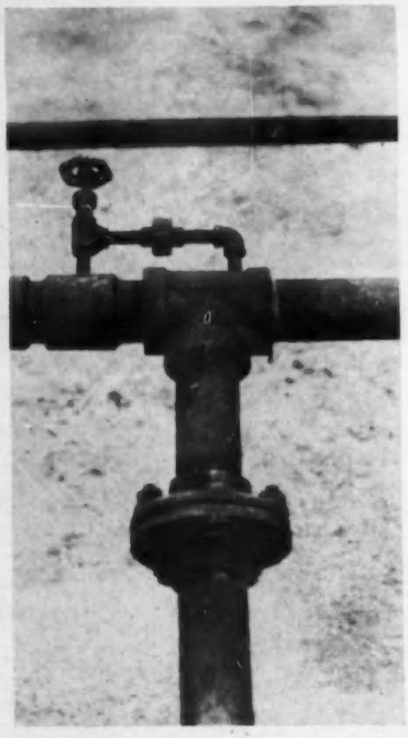
You handle pipe faster and safer with Mission *"Rolling Dog"* Slips.

MISSION MANUFACTURING CO.

Practical Operating Hints for

1. SALT WATER

Choke Unloading Line Clears Water Flooding



High-pressure valve and line set around the nipple afford unwatering facilities.

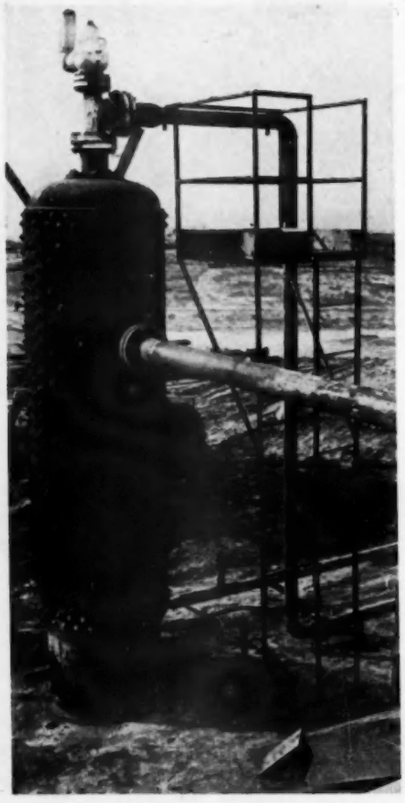
IN some wells flowing under restricted production because of conservation practices, salt water tends to accumulate, often with detrimental effects. One company equips Christmas trees of these wells with small piping which allows the fluid to bypass the choke when the well loads up with water, enabling rapid flow both around and through the choke until accumulated water is expelled. A needle valve gives direct control of the bypass, being kept closed until purging is necessary. After salt water is expelled, the valve is again closed and normal flow through the choke is resumed.

The bypass is made of short joints of ½-inch pipe, overall length is about 10 inches, or sufficient to encompass the choke nipple. Outlets are drilled into the collars of nipples where the bypass ties into the flow line and into them are welded short nipples. These are then connected with appropriate fittings, including a union and valve.

When the valve is opened, greater volume of fluid is passed from the well, as in addition to usual movement through the choke, it also flows through the bypass pipe. Thus, the well is quickly unloaded without necessity of removing choke or making frequent alterations of permanent surface equipment.

2. SCAFFOLDING

Welded Scaffold Aids Separator Upkeep



Combined ladder and platform simplify access to elevated valves and tie-ins.

ASSEMBLING and painting the upper parts of tall separators being installed was materially aided by the welder of one company who assembled and welded together a handy ladder and working platform.

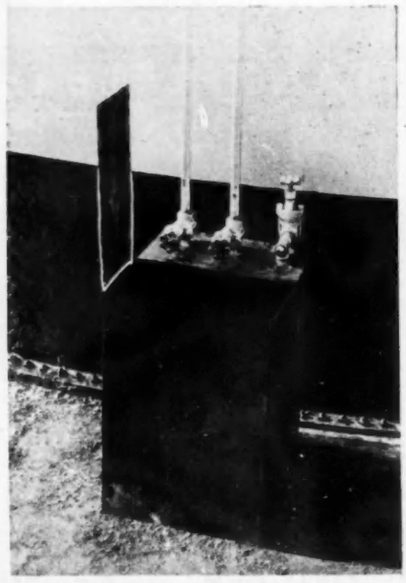
The ladder was built of ¾-inch pipe, together with a short section of derrick ladder. At a convenient level a wooden platform, approximately three feet square, was built into the structure, on which the men could work and also lay their tools.

Since the separators were practically the same height, and had the same type of piping and fittings, it was easy to provide a simple hook arrangement on the back side of the top part of the platform railing, which could be hooked over the horizontal section of the gas outlet line which connects into the top of the trap. As soon as this pipe was bolted together temporarily, the ladder could be set up, after which each of the flanges and any other fittings including the safety valve assembly could be made up by working on the platform. Later when the completed trap was to be scraped and painted, the same ladder could be used.

3. SAMPLING

Central Test Leads and Box Gather Waste

NEATNESS, as well as a precaution against possible fire hazards, makes it desirable to keep tank exteriors and the battery as a whole, as free as possible from contamination by splashed oil. Principal contributors to this hazard is the group of sample cocks on the side of each tank, from which the gauger or pumper must obtain his



Metal sump at lease tank concentrates sampling overflow and promotes safety.

oil samples before the tank may be shipped.

In order to confine the oil spray as much as possible when these samples are being taken, one company employs a small all-welded sheet metal box which can be set on the ground below the sample cock lines. Nipples below the valves on the sample lines extend down into the box for several inches. The box measures 16 by 14 by 24 inches high. One half of the cover of the box is provided with a hinge so that a section 8 by 14 inches can be swung up to allow the pumper to reach in and fill his sample cans. Excess oil in the box may be drained through a buried outlet leading to a nearby waste sump.

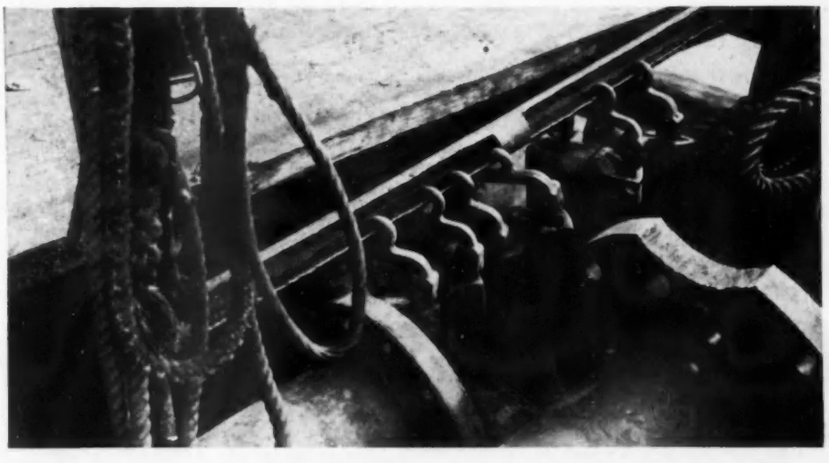
4. TOOL CARE

Tubing Slip Selection On Segregation Rack

To carry and neatly segregate the several sets and sizes of tubing slips used on the various wells on their large leases, was the small but important problem solved by the production department of one of the large companies in California. A small but heavy trailer is used to haul the larger and more cumbersome pieces of equipment, along with those tools which, though necessary to have on the job, may be only occasionally used in the course of pulling several wells.

On one side of this trailer approximately 12 inches above the floor, the welder installed a rack in which can be hooked and carried the array of slips which must be carried with the maintenance crew at all times. This handy rack was made by cutting a longitudinal section from the side of a 5-foot length of 2-inch tubing. The opening is only approximately 1½ inches wide, but the pipe, in mounting it on the trailer bed, was turned so that the opening faced upward at about 45 degrees from horizontal. Segments of uncut pipe were allowed to remain at several points along its length in order that they might lend rigidity to the pipe. These segments also permit a rough classification or segregation of sizes of the slips as they are hung in the rack.

Aside from the convenience and space-saving features of the rack, is another very important element, that of protecting the hardened teeth of each slip, which are not in a position where they can contact and dull each other, thus prolonging their useful life.



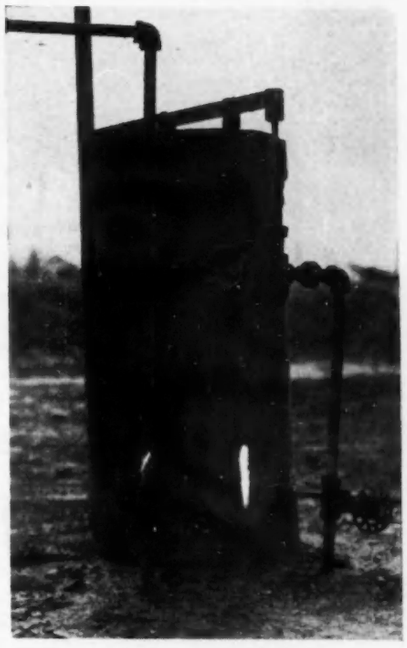
Slotted pipe mounted on a service truck provides novel support for the various sizes of servicing equipment and simplifies proper selection when on the job.

5. WATER SUPPLY

Outside Float Mount Controls Well Flow

An automatic flow regulator for a water well may be erected in a convenient site away from the storage reservoir, offering the advantage of increased protection to the float and greater accessibility. The regulator must be directly connected with the reservoir to be sensitive to variations in the fluid level.

One such device is housed inside a casing made from large pipe upright in the ground at a height equaling or exceeding height of the dike around the storage pit. The bottom is swaged for connecting with a 4-inch line underground to the water pit at a point below the minimum fluid level. Water from



Separate float chamber for reservoir simplifies maintenance and control.

the pit fills the line, and also fills the large container pipe to the level with the water in the pit.

A metal float operates inside the housing, fluctuating with changes in fluid level in the pit. Attached to an arm one end of which is connected to a valve on a gas line, the float is regulated to open the valve when the surface of the fluid falls to a designated level. As the gas line extends to the water well, admission of gas lifts fluid from the well for disposition into the pit. A rise in the fluid level automatically closes the valve and flow is terminated.

A bypass for the gas is provided in the event that water demands are increased. By closing a valve on the line leading to the float and opening a valve on the bypass, gas flow is into the well independent of the float or the water level in the reservoir.

LUBRICATION MAKES YOUR

Oil Field Cordage Last Longer

To make cables, ropes and lines that give top performance under the severe conditions of oil well service, we've had to learn a lot about lubrication.

For example, the lubricant in Plymouth Drilling Cable is a type specially developed to reduce internal friction to a minimum and stay on the fiber for the life of the rope. It's one of the reasons why Plymouth cable stands up under the stress, heat and abrasion of the drilling operation. It has the ability to "make hole" faster, and "drill ahead" without losing its elasticity and strength.

All Plymouth Oil Well Cordage is made of Manila fiber best adapted to the job — and produced to rigid quality specifications by third and fourth generation Plymouth Ropemakers. Its extra margin of strength, exceptional ease of handling and long life have been proved in every field in the world.

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Drilling Cables	Bull Ropes	Torpedo Lines
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• • •

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North Plymouth, Massachusetts

Distributors: Oil Well Supply Company.
Over 90 stores in all fields with ample stocks of Plymouth Oil Well Cordage available at all times.

PLYMOUTH

THE *Rope* YOU CAN TRUST

THE WEEK'S NEWS

Allowables

Michigan Order Again Raises Well Allowables

A second emergency proration order since January 1 was ordered January 9 lifting allowable from 125 to 175 per 20-acre-unit well daily in Reed City and from 200 to 250 per 20-acre-unit well in South Roscommon field, expected to step up production about 6000 barrels daily.

P. J. Hoffmaster, state supervisor, said the order was issued when it "became apparent that original allowables had created a serious shortage and threatened curtailment or shut down of some refineries."

Hoffmaster said that even with the higher allowables he did not believe the January production would average above 49,000 barrels daily. The original 125-barrel maximum was set to bring production down to a federal norminations of 47,400.

49,000 Barrels

Hoffmaster explained that the higher allowables would not provide any oil for out-state delivery but would meet the Michigan demand.

Uncertainties created by production curtailment and the 40-640 spacing order, the latter under protest for several fields in Michigan, did not reflect itself in the January 8-9 auction of leases by the Department of Conservation on lands owned by the state. Officials had been tempted to call off the sale fearing that little interest would be shown.

A total of 60,934 acres out of the 65,212 offered were leased for $61,129 or an average of better than $1 an acre. All of the leases auctioned were wildcat except one 40-acre lease in the South Roscommon field that brought a bonus of $18,075. Exclusive of this the sale averaged 60 cents an acre.

New Texas Wells Get Higher Production Allowables

Closer cooperation between federal authorities, state regulatory bodies and the oil industry was indicated by developments in Austin last week.

The Office of Petroleum Coordinator stationed W. J. Murray, Jr., in Austin to pass on applications for permits to drill new wells. Murray was checking each application made to the Texas Railroad Commission to determine whether it conformed to the federal ruling, assigning 40 acres to each well. A large number of applications await his inspection and many were delayed indefinitely because the 40-acre unit could not be assigned to individual wells.

Encourage Discoveries

As a means of encouraging discoveries and extensions in areas where new wells brought in, the railroad commission materially increased the allowances made to new wells in Texas. It also extended the time of these grants from four to six months, or until five wells are drilled. Maximum allowance was raised to 400 barrels where it had been 250 barrels before. The new figures, effective February 1, as compared to allowances set out under the old policy, are indicated below:

Feet	Barrels
0 to 1000	40
1000-2000	80
2000-3000	120
3000-4000	160
4000-5000	200
5000-6000	240
6000-7000	280
7000-8000	320
8000-9000	360
9000-10,000	400
10,000-11,000	440
11,000-12,000	480

Operators likewise joined in the cooperative effort by requesting 40-acre proration units in each hearing where special field rules were discussed. Continental Oil Company presented programs for two fields which would allow wells drilled 330 feet from lease lines and 1000 feet apart. While this pattern is unusual, it would allow for further development if the 40-acre rule is relaxed. In each instance the company's engineers testified they thought one well would not drain 40 acres. It was evident that the programs were presented to conform to federal regulations.

A similar plan was offered for the Joyce Richardson field in Harris County, but since this is a distillate field, operators requested that in addition to the 40-acre unit, a 40-acre tolerance be allowed for each well. Applicants in all three cases asked for a large acreage allowance as a part of the proration plan.

Meanwhile numerous hearings had been scheduled late in January to revise the spacing and proration allocation regulations for several fields which are now assigned less than 40 acres to the well. The commission will be asked to change these proration programs to conform more nearly to federal policies.

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Tri-State Operators Organize Association

The Tri-State Petroleum Association for Defense Co-ordination was organized by 200 operators at Evansville, Indiana, Monday, January 13. Jack Trenchard, Evansville, was elected president and Sam Jarvis, Decatur, Illinois, vice president. The group includes oil men of Illinois, Indiana and Kentucky.

Purpose of the association is to present consolidated problems of operators to officials of petroleum coordinator's office.

No Indiana Curtailment To Meet U. S. Quota

Because weather conditions already has reduced Indiana's January oil production, a seven-man committee representing Indiana's oil industry, meeting at Evansville January 10, agreed that no curtailment program will be required in Indiana to meet the January quota of 17,300 barrels daily as set up by the petroleum coordinator.

The committee, headed by Ben F. Hake, Gulf Refining Company geologist, Indianapolis, recommended that the state conservation department compile data of state production by pools and leases in order that some basis may be reached for limiting production.

The committee will meet again in Indianapolis January 26.

Harris and Montgomery County Fields Blacked Out

Twenty oil and gas fields in Harris and Montgomery counties, Texas Gulf Coast, were blacked out from 8 to 8:30 p. m. January 12 as a part of the general practice blackout of cities and towns in the two counties.

Two observers were stationed in each field, their reports showing complete success in all fields. Wells in some fields were shut-in while the flares on many wells were blown out for the 30 minutes. In some instances many wells produced their allowables in day time and were shut down for the night, thus obviating any necessity for flares.

Harris County fields blacked out were Friendswood (Webster), Fairbanks, Aldine, Tomball, Pierce Junction Goose Creek, North Houston, Eureka, South Houston, Dyersdale, Richardson (Ogburn), Bamell, Clear Lake, Clinton, Humble, Satsuma and Mykawa. Conroe, Lake Creek and Magnolia were blacked out in Montgomery County.

Texas and Illinois Cause Decrease in Production

United States crude oil production decreased abruptly in the week ended January 17, in reflection of a sharp drop in Texas, having averaged 4,045,450 barrels daily, compared with 4,251,700 the week before. The new production rate was about 100,000 barrels under daily average market demand for domestic crude as forecast for January by the Bureau of Mines.

Texas declined to an average of 1,504,100 barrels daily from 1,715,200 the week before, and temporarily was under demand, which had been estimated for January at 1,551,457 by the petroleum coordinator in assigning state quotas.

Another important change in production was a drop of over 40,000 barrels in Illinois, which averaged only 337,850 barrels daily against 381,600 the week before.

California was up to 632,600 barrels daily from 611,100 the previous week but was under demand of 646,200 barrels a day. Oklahoma was up 4,500 barrels to 415,950 daily and was 10,000 barrels under the state's quota. Kansas increased to 254,850 barrels daily from 226,650, and Louisiana was up 100 barrels to 361,900. New Mexico declined 700 barrels to 118,300. Mississippi averaged 73,350 barrels daily, against 75,600 the week before.

Light and Heavy Fuel Oil Stocks Cut; Gasoline Up

Latest weekly statistics of the industry covering the 7 days ended January 10, reflected a substantial reduction in refinery runs of crude oil and accompanying material withdrawals of both light and heavy fuel oils from storage, as cold weather required large quantities of fuel for heating, while use of heavy fuels for war productioin continued exceptionally great. Gasoline stocks were watched for possible reaction to the rubber shortage, but the addition of about 1,200,000 barrels of that product to storage was only a normal, seasonal development.

United States crude oil production averaged 4,229,150 barrels daily in the week of January 10 and was close to a million barrels above the 3,364,450 barrels per day produced in the corresponding week a year ago. The 864,700-barrel year-to-year increase in output of the country's wells was a gain of 25.7 percent. However, the production was only about 90,000 barrels above the indicated daily average demand for January, as estimated by the Bureau of Mines.

Crude runs to stills were down to 3,891,000 barrels daily from 3,961,000 the week before, and they were about 200,000 barrels below the all-time peak that was reached at the middle of the past October. The new rate of runs was about 350,000 barrels a day (10 percent) above the daily average runs of 3,543,000 barrels reported for the corresponding week a year ago.

Stocks of finished and unfinished gasoline in the United States were increased from 92,987,000 to 94,204,000 barrels during the week ended January 10, and the latter quantity was 8,310,000 barrels

United States Crude Oil Production Down Sharply

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Recommendation of Petroleum Coordinator for January	State Allowable (Barrels Daily in January)	BARRELS DAILY FOR WEEK ENDED Jan. 10	Jan. 17
TEXAS:				
Texas Gulf Coast	.....	.....	345,200	297,800
East Texas	.....	.....	437,700	369,200
East Central Texas	.....	.....	93,500	87,700
South Texas	.....	.....	255,500	220,200
West Texas	.....	.....	344,300	295,300
North Texas	.....	.....	147,500	145,500
Panhandle	.....	.....	91,500	88,400
Total Texas	1,573,500	[1]1,551,457	1,715,200	1,504,100
CALIFORNIA:				
Long Beach	.....	.....	38,100	38,600
Midway-Sunset	.....	.....	58,900	57,000
Kettleman Hills	.....	.....	27,100	31,900
Wilmington	.....	.....	85,800	87,100
Others	.....	.....	401,200	418,000
Total California	646,200	[2]646,200	611,100	632,600
OKLAHOMA:				
Oklahoma City	.....	.....	71,600	78,650
Seminole Area	.....	.....	112,100	110,350
Others	.....	.....	227,750	227,950
Total Oklahoma	415,700	425,000	411,450	415,950
ILLINOIS:				
Salem	.....	.....	66,900	64,850
Louden	.....	.....	57,750	57,650
Centralia	.....	.....	7,500	6,800
Other New Pools	.....	.....	237,700	196,950
Old Pools	.....	.....	11,750	11,600
Total Illinois	386,400	.....	381,600	337,850

DISTRICT OR STATE	Recommendation of Petroleum Coordinator for January	State Allowable (Barrels Daily in January)	BARRELS DAILY FOR WEEK ENDED Jan. 10	Jan. 17
LOUISIANA:				
North Louisiana	.....	.....	82,300	82,200
South Louisiana	.....	.....	279,500	279,700
Total Louisiana	329,300	[3]361,111	361,800	361,900
KANSAS	259,900	[4]256,900	226,650	254,850
NEW MEXICO	121,200	121,200	119,000	118,300
EASTERN STATES:				
Pennsylvania Grade	74,400	.....	67,150	70,500
Others, Eastern	21,400	.....	18,500	18,500
[7]Total Eastern States	95,800	.....	85,650	89,000
MOUNTAIN STATES:				
Wyoming	78,600	.....	82,050	82,000
Montana	21,500	.....	22,400	20,750
Colorado	5,900	.....	5,500	5,250
Total Mountain States	106,000	.....	109,950	108,000
MICHIGAN	47,400	[5]54,850	54,750	49,500
INDIANA	17,300	.....	20,350	21,700
ARKANSAS	73,700	[6]75,689	73,400	73,050
MISSISSIPPI	60,400	.....	75,600	73,350
NEBRASKA	5,600	.....	5,200	5,300
[7]Total 8 Prorated States	3,466,900	3,492,407	3,573,350	3,410,250
Total United States	4,138,400	.....	4,251,700	4,045,450

[1] Calculated daily average of actual production at beginning of month, allowing for underproduction of 3½ percent below net allowable, which was figured at 1,620,659 barrels daily as of January 1. However, allowable normally increases as new wells are completed, and consequently, actual daily average production for month may be expected to be slightly greater than average as calculated for January 1. Under January order, most Texas fields were ordered shut down January 4, 11, 15, 18, 25, 30 and 31.

[2] The District 5 Production Committee has named a Conservation Committee to distribute the California January quota of 646,200 barrels, as assigned by Petroleum Coordinator Ickes.

[3] Set before OPC recommendation made; this explains 31,811 barrel excess. Louisiana Conservation Committee will comply with OPC recommendation beginning February 1 (or on January 15 if OPC wishes).

[4] Order also will permit 3,000 barrels for new wells; total same as OPC estimate of demand.

[5] No definite state allowable fixed under prescribed regulations; figures shown here represent daily average production in four weeks ended December 27.

[6] Allowable for first quarter of year; actual production in January not expected to exceed Office of Petroleum Coordinator's figure of 73,700 barrels.

[7] Texas, California, Oklahoma, Louisiana, Kansas, New Mexico, Arkansas, Michigan.

TOOL JOINTS AND DRILL PIPE ARE SCARCE!

Get more and longer use by handling them right

USE GRAY DRILL PIPE RACKS

AND ENJOY THESE ADVANTAGES . . .

1. Protect the threads from damage such as that frequently encountered in racking pipe on such hard materials as cable or chain, thereby lengthening tool joint life.

2. Eliminate chance of picking up splinters and other debris, thus avoiding the possibility of fouled core barrels, plugged bit eyes, and washed out tool joints.

3. Provide space for orderly arrangement of pipe on the stands as it comes from the hole.

4. Provide safer working conditions for your men on the derrick floor.

FIGURE 1

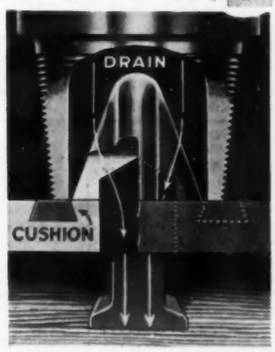

Figure 1. Section through one pin of a rack, showing the drainage channel and metal cushion on which the tool joint pin seats.

FIGURE 2

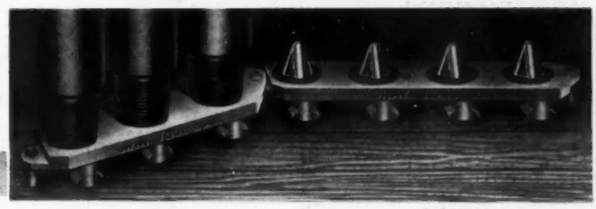

Figure 2. A three-section and four-section drill pipe rack, one with pipe racked on it, and the other ready to receive pipe.

Gray Drill Pipe Racks are made in convenient sections to support 3 or 4 stands. Each section links with adjacent sections to form a row for any required number of stands. Full details upon request.

GRAY

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West Coast Distributor: WAGNER-MOREHOUSE, INC., Los Angeles

(nearly 10 percent) greater than that of 85,894,000 barrels on hand January 10 last year.

Storage of gas oil and distillate fuel in the United States was reduced from 49,357,000 barrels on January 3 to 47,250,000 barrels January 10, or a little over 2,000,000 barrels, whereas there was a withdrawal of only about 1,400,000 barrels in the like week a year ago. The remaining total was, however, in excess of that held a year previously by 5,622,000 barrels, or 13.5 percent. Especially cold weather in a large part of the country was responsible for the draft on storage.

Stocks of residual fuel oil were lowered from 95,857,000 barrels on January 3 to 94,885,000 on January 10, a million dollar reduction that compared with one of only one half million barrels in the corresponding week last year. The stocks left on hand were 5,668,000 barrels (5.6 percent) under those of 100,553,000 barrels reported for January 10 last year.

Storage of refinable crude oil in the United States was increased from 243,990,000 barrels on December 27 to 244,440,000 on January 3, the Bureau of Mines reported. The latter quantity was 16,203,000 barrels (6.2 percent) less than that of 260,643,000 barrels reported for January 10 a year ago.

Germany Still Has Ample Oil Supply

No immediate collapse of the German military machine because of a lack of oil is to be anticipated, while Nazi acquisition of the Near Eastern oil fields would assure ample petroleum for all essential needs if transport and reconstruction problems were solved, it was warned over the week-end by the United States Bureau of Mines.

Reviewing the results of Germany's eight-year mobilization of resources through purchase and aggression, as well as internal effort, the bureau found the Nazis in possession of ample supplies of essential minerals and metals of most kinds, while in those of which she lacks a plenitude, substitution, reclamation and other devices have been resorted to.

The area now controlled or dominated by Hitler consumed approximately 221,000,000 barrels of petroleum products in 1938, and produced in that year about 78,000,000 barrels (chiefly in Rumania), the report stated.

"Germany has adopted extreme measures to meet the shortage resulting from the British blockade," it was declared. "As early as 1938 she was producing 14,000,000 barrels of synthetic petroleum products from coal, of which Germany has very large reserves. Her collapse due to failure of oil supplies thus cannot be forecast with assurance at this time."

It was pointed out that Western and Central Europe have always been primarily coal-burning areas. Fuel oil has been consumed chiefly by the merchant marine, the national navies and the oil industry. The British blockade has virtually swept the merchant marine of Continental Europe from the high seas; naval requirements under present conditions are relatively small; civilian consumption of gasoline has been cut to the bone, and consumption of fuel oil in the oil fields and refineries always has been relatively low.

The most serious industrial problem probably is the supply of lubricating oils, but Germany has pioneered in reclaiming and re-using such oils, and to some extent animal and vegetable oils have been used to replace mineral lubricants.

"In addition," it was explained, "Germany probably built up substantial stocks prior to the outbreak of war. The 221,000,000 barrels of indicated petroleum consumption in the European and Mediterranean areas now controlled by Germany undoubtedly included considerable accumulation of stocks, particularly in Germany where the indicated German demand for mineral oils rose rapidly from 24,000,000 barrels in 1933 to 53,000,000 barrels in 1938.

"In the recent pre-war years nearly every European country was requiring the importing and refining companies to maintain from three to six months' supply of mineral oils on hand at all times. The rapid conquest of France, Belgium, the Netherlands, and Scandanavia placed in German hands an unknown but considerable amount of refined oils which had been accumulated under the self-sufficiency programs of these countries.

"Taking everything into consideration, the German petroleum problem appears to be largely one of rationing and administration, with 78,000,000 barrels or more of petroleum and petroleum substitutes at its disposal, and military needs and essential industrial needs given preference, Germany appears to be in no immediate danger of the failure of her military machine for lack of gasoline and lubricants.

"The occupation of the Near Eastern oil fields by Germany, which is still a possibility, would add to her current supply a potential production of 192,000,000 barrels annually, or more than sufficient for all civilian and military needs. But the lack of facilities to transport this oil overland to Germany might deprive her of any real advantage of such occupation for some years. Any destruction wrought by the retiring troops, if they were forced to retreat, would be a further handicap to Germany in the exploitation of these oil fields even though permanent destruction of this oil supply cannot be accomplished."

Trends of Operations and Changes in Stocks

Figures are from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines' basis, except those on crude stocks, which are from Bureau of Mines weekly reports.

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1939:						
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,085,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
August 5	[2]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 26	[1]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
October 7	3,435,850	3,505,000	231,564,000	[6]71,152,000	38,549,000	114,397,000
October 21	3,771,550	[2]3,650,000	[3]229,127,000	72,122,000	39,358,000	115,060,000
1940:						
January 27	3,611,600	3,470,000	237,339,000	87,914,000	27,407,000	103,015,000
February 24	3,732,100	3,490,000	240,836,000	96,719,000	25,390,000	103,419,000
March 30	3,841,250	3,585,000	250,561,000	101,370,000	23,778,000	105,081,000
April 20	3,858,550	3,535,000	254,881,000	[1]102,817,000	24,779,000	103,323,000
April 27	3,845,250	3,555,000	256,670,000	102,452,000	24,997,000	102,552,000
May 25	3,835,650	3,580,000	259,330,000	100,297,000	28,356,000	104,015,000
June 22	3,846,450	[2]3,690,000	260,891,000	97,276,000	32,751,000	104,683,000
June 29	3,639,550	3,625,000	262,059,000	95,142,000	33,590,000	104,486,000
July 27	3,690,400	3,555,000	262,579,000	90,173,000	38,981,000	105,924,000
August 31	3,501,350	3,575,000	265,865,000	85,393,000	44,766,000	108,774,000
September 28	3,799,950	3,600,000	263,609,000	82,273,000	47,986,000	108,450,000
October 26	3,640,300	3,565,000	262,746,000	80,891,000	48,893,000	108,475,000
November 9	3,584,200	3,510,000	261,631,000	[6]79,847,000	48,408,000	107,687,000
November 30	3,335,050	3,510,000	262,679,000	80,284,000	46,212,000	106,618,000
December 28	3,385,500	3,585,000	261,552,000	83,274,000	42,266,000	102,620,000
1941:						
January 25	3,599,100	3,625,000	260,093,000	88,762,000	39,039,000	100,297,000
February 22	3,629,650	3,590,000	261,783,000	95,812,000	34,381,000	98,631,000
March 29	3,746,550	3,625,000	266,187,000	[2]99,727,000	29,949,000	96,152,000
April 26	3,726,850	3,675,000	266,149,000	96,647,000	29,543,000	94,732,000
May 31	3,786,100	3,699,000	263,356,000	93,845,000	33,524,000	92,757,000
June 28	3,847,250	3,930,000	259,399,000	91,461,000	35,732,000	92,896,000
July 26	3,869,950	3,920,000	252,728,000	86,945,000	40,197,000	93,855,000
August 30	4,004,700	4,070,000	249,413,000	81,672,000	45,351,000	95,052,000
September 27	4,060,000	3,980,000	246,649,000	81,003,000	49,950,000	95,251,000
October 4	3,860,750	4,015,000	246,144,000	[6]80,870,000	49,553,000	96,016,000
October 18	4,110,550	[1]4,120,000	243,605,000	82,584,000	52,403,000	95,800,000
October 25	4,098,800	4,060,000	242,261,000	83,343,000	53,183,000	95,295,000
November 15	4,086,850	4,010,000	240,399,000	83,412,000	[2]54,983,000	95,993,000
November 22	[1]4,336,850	3,995,000	241,956,000	84,579,000	54,396,000	95,982,000
November 29	4,086,000	4,115,000	242,884,000	85,525,000	54,141,000	95,971,000
December 6	4,107,950	3,945,000	244,200,000	86,356,000	53,946,000	95,342,000
December 13	4,109,550	3,997,000	242,683,000	87,422,000	52,809,000	95,762,000
December 20	4,315,150	4,070,000	243,617,000	89,297,000	51,487,000	95,560,000
December 27	4,080,850	4,096,000	243,990,000	[6]91,133,000	[6]50,177,000	[6]95,819,000
January 3	4,038,000	3,961,000	244,440,000	92,987,000	49,357,000	95,857,000
January 10, 1942	4,229,150	3,891,000	.....	94,204,000	47,250,000	94,885,000
January 10, 1941	3,364,450	3,543,000	[4]260,643,000	85,894,000	41,628,000	100,553,000
Amount of change in past year	+864,700	+348,000	—16,203,000	+8,310,000	+5,622,000	—5,668,000
Percent change in past year	+25.7	+9.8	—6.2	+9.7	+13.5	—5.6

[1] All time peak. [2] Peak for year. [3] Lowest since April, 1922 [4] Stocks, January 4, 1941.
[5] Lowest since October, 1922, due to shut down of six Mid-Continent states. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] Revised.

U. S. FIELD OPERATIONS

Illinois

New Work at Record Low Since Boom Started

Set casing in Jefferson wildcat; White County discovery well completed; 17 first reports for week ended January 13 set new low in Illinois development, caused by delays in interpretation of federal orders and other related factors.

Jefferson County: Magnolia Petroleum Co.'s Riddle 1, NE SE SW 8-3s-1e, woc 5½-in at 3737 to test Devonian lime at 3752-69 ft. Elev 520 ft; Mansfield 1367, Waltersburg 1410, Tar Springs 1485; Glen Dean 1556; Hardinsburg 1608; Golconda 1655; Cypress formation 1722; Cypress 1819; Benoist formation 1960; Benoist sand 1969; Renault 2003; Aux Vases 2049; Lower O'Hara 2150; Rosiclare 2163; St. Louis 2338; Devonian 3707 ft. There is no Devonian production in the county which gets most of its output from Dix and Woodlawn fields, productive in Benoist.

White County: Joe Dawson's H. L. Clark Estate 1, NW SW NE 36-5s-10e, north of Maunie and more than a mile south of other production, pumped 132 bbls of oil, 3% water, in 24 hours, td 3150 ft McClosky.

Coles County: Carter Oil Co. has staked 40-acre location for third test in one-well Cooks Mills field, Hamlin 1, S½ NE NW 11-13n-7e, south of discovery well which is pumping 18 bbls a day from Aux Vases.

Saline County: Seaboard Oil Co.'s Galbreath 1, five miles east of Thompsonville pool of Franklin County, C W½ NW SW 28-7s-5e, abnd at 3420 ft in top of St. Louis lime. F. M. Summers' Roberts 1, SE SW NE 6-8s-7e, testing Aux Vases at 2953-71 ft after plug back from McClosky at 3037 ft.

COMPLETIONS

Clay County—Pure's Pearce Consol. 1, s½ sw nw 10-2n-7e, McCl. 3082-85 ft, 3090-94 ft, td 3097 ft, 41 bbls oil. Gulf's Keck 3, nw se se 26-4n-7e, Tar Springs 2325-2338 ft, td 2338 ft, 34 bbls oil.

Clay County: Wildcat—Kingwood et al's Coggin 1, n½ sw nw 6-3n-7e, abnd 3113 ft.

DuPage County: Wildcat—I.C.R. Syndicate's Bartlett Village 1, sw nw nw 2-40n-9e, abnd 1175 ft.

Edwards County — Washburn & Powers' Markham 1, nw se nw 32-2n-14w, abnd 3150 ft.

Fayette County—Carter's Doty-Kinsey 2, se ne se 12-8n-3e, Weller 1526-1534 ft, td 5145 ft, 42 bbls oil; Zetsche 3-D, c ne se 28-8n-3e, Devonian 3120-3126 ft, td 3126 ft, 250 bbls oil.

Franklin County: Wildcat—Adkins' Old Ben Coal Co. L-1, se se se 5-5s-2e, abnd.

Hamilton County—Shell's Hatcher A-1, sw se se 11-6s-5e, abnd 3374 ft; Daily 7, nw se ne 12-6s-6e, Beth. 2890-2916 ft, A. V. 3008-17 ft, td 3243 ft, 72 bbls oil. Texas' E. Smith 1, sw se se 12-6s-5e, A. V. 3061-77 and 3084-93 ft, O'Hara 3140-3155 ft, McCl. 3245-78 ft, td 3290 ft, 415 bbls oil. Shell's Lockwood B-3, nw ne sw 13-6s-5e, A. V. 3107-3136 ft, td 3348 ft, 700 bbls oil. Magnolia's Sloan 6, sw ne nw 13-6s-5e, A. Vases 3152-75 ft, O'Hara 3214-3229 ft, td 3416 ft, 70 bbls oil. Shell's C. A. Smith 3, nw se ne 13-6s-5e, A. Vases 3106-3146 ft, 3348 ft, 210 bbls oil. G. C. Curtis' Foster 1, se se sw 15-6s-5e, abnd 3394 ft. Cameron Oil Co.'s Lockwood B-2, se sw nw 24-6s-5e, A. Vases 3085-3100 ft, td 3116 ft, 422 bbls oil.

Hamilton County: Wildcat—Zephyr Drlg. Co.'s Stephens 1, e½ nw sw 22-5s-7e, abnd 3582 ft.

Jasper County—Lain Oil & Gas Co.'s Burton 1, w½ nw sw 5-5n-14w, McCl. 2826-33 ft, td 2855 ft, 792 bbls oil. C. R. Craft et al's Wade 2, e½ sw nw 5-5n-14w, McCl. 2822-2830 ft, td 2871 ft, 200 bbls oil. Pure's Cunningham 1, e½ ne ne sw 19-5n-10e, McCl. 2850-53 ft, 2855-57 ft, td 2882 ft, 119 bbls oil. Shulman Bros.' Acklin 3, ne nw se 5-6n-10e, abnd 2819 ft. Carter's Doty-Kinsey 2, se ne se 12-8n-3e, Weller 1526-1534 ft, td 1545 ft, 42 bbls oil. Feliz Jablonski et al's Fischer 1, c e½ sw sw 18-5n-14w, abnd 3053 ft.

Jefferson County—Gulf's Blankenship Comm. 4, se nw sw 1-3s-1e, Beth. 1940-1958 ft, td 1958 ft, 187 bbls oil. T. Blake Dieickson's Miller 1, ne ne ne 18-2s-2e, abnd 2439 ft. J. L. Youngblood et al's Thompson 1, w½ nw sw 29-4s-5e, abnd 3478 ft.

Marion County: Wildcat—Deaton & Bears' Sundesky 1, e½ nw sw 33-1n-4e, abnd 2949 ft.

Richland County: Wildcat—Pure's Baley A-1, e½ nw se 28-4n-9e, McCl. 2991-2993 ft, td 3003 ft, 550 bbls oil.

Saline County: Wildcat—Kingwood's Gullett 1, ne ne sw 31-8s-5e, abnd 3145 ft.

St. Clair County: Ohio Oil Co.'s Schwartz 1, sw se ne 11-2s-6w, abnd 970 ft.

Washington County—McCarthy et al's Buhl 2, nw ne nw 23-1s-1w, abnd 1550 ft. Winn & Redwine's Dix 1, ne ne ne 19-3s-1w, Beth. 1365-72 ft, td 1372 ft, 30 bbls oil. Falcon-Seaboard's Lamczyk 1, sw sw se 1-3s-2w, abnd 1701 ft.

Wayne County—Texas' Ray Comm. 1-A, n½ nw se 26-1n-6e, abnd 3157 ft. Gulf's Legg 2, e½ sw se 33-1n-6e, McClos. 3168-3176 ft, td 3236 ft, 130 bbls oil. United Prod. Co.'s Schell 8, w½ se ne 34-1n-6e, Aux Vases 2979-3004 ft, td 3004 ft, 344 bbls oil; Schell 5, e½ sw nw 35-1n-6e, Aux Vases 3003-3015 ft, td 3020 ft, 66 bbls oil; Carlens 7, w½ nw sw 35-1n-6e, Aux Vases 2997-3018 ft, td 3018 ft, 325 bbls oil; Schell 6, w½ sw nw 35-1n-6e, abnd 3078 ft. Wiser Oil Co.'s Watson 2, n½ ne se 35-1n-6e, McClos. 3183-3190 ft, td 3286 ft, 450 bbls oil. Pure's Barth D-1, e½ se se 11-1n-7e, L. O'Hara 3053-3063 ft, td 3125 ft, 219 bbls oil. Aetna Oil Co.'s Jamison 1, 120 ft w of c e½ ne sw 31-1n-7e, McClos. 3215-3226 ft, td 3242 ft, 55 bbls oil. Deep Rock Oil Corp.'s Elkelberry 1, w½ w½ e½ 1-1s-6e, L. O'Hara 3164-66 ft, McCl. 3203 ft, td 3217 ft, 200 bbls oil. Olson Drlg. Co.'s Weaver 2, n½ se nw 1-1s-6e, Aux Vases 3075-3090 ft, td 3090 ft, 120 bbls oil. Bell Bros.' Fuhrer 2, e½ sw sw 28-1s-6e, abnd 3199 ft.

Wayne County: Wildcats—Wiser Oil Co.'s Ellis 1, e½ se ne 32-1n-5e, abnd 2989 ft. Joe Bauers' Knapp 1-A, w½ sw nw 4-1n-7e, abnd 3241 ft. Karl Buerkle et al's Williams 1, w½ sw ne 30-1s-6e, abnd 3272 ft. Sinclair-Wyoming's Goodart 1, e½ se ne 16-2s-5e, abnd 3258 ft.

White County—Lelalu Oils' Hon 3, ne nw se 32-3s-14w, Beth. 2764 ft, td 2921 ft, 83 bbls oil. Mabee O&G Co.'s O. Smith 9, nw sw se 4-4s-14w, Aux Vases 2805-2831 ft, Beth. 2702-2728 ft, td 2832 ft, 26 bbls oil. Hon 4, sw nw ne 9-4s-14w, abnd 2966 ft. Jack German's Hon 5, sw nw se 9-4s-14w, Aux Vases 2834-2852 ft, td 2858 ft, 24 bbls oil. Pure's Calvin A-8, se ne nw 9-4s-14w, Pt Crk 2704-15 ft, td 2720 ft, 61 bbls oil. Skelly's Bryant 1, ne ne sw 7-4s-10e, Tar Spgs 2529-2546 ft, td 2547 ft, 50 bbls oil. Sun Oil Co.'s Strowe 2, sw sw ne 7-4s-10e, Tar Spgs 2532-46 ft, td 2546 ft, 20 bbls oil; Kern et al 1, nw nw se 4-4s-10e, Tar Spgs 2526-2542 ft, td 2543 ft, 90 bbls oil; Greathouse 40, nw sw nw 4-5s-14w, Bethel 2718-2734 ft, td 2747 ft, 125 bbls oil. Tide Water's Bacon 8, sw ne se 5-5s-14w, Aux Vases 2843-2860 ft, td 2979 ft, 115 bbls oil; Bacon 7, sw se ne 5-5s-14w, McCl 2963-2969 ft, td 2971 ft, 54 bbls oil; W. F. Catlett's Calvert 2, sw se nw 32-5s-10e, Clore sd 2105-2116 ft, td 2116 ft, 115 bbls oil. H. R. Gholson's Calvert 1, nw nw se 32-5s-10e, abnd 2131 ft. Pure-Carter's Gowdy 1, se nw ne 18-6s-9e, Paint Crk 2770-2805 ft, td 2805 ft, 387 bbls oil. Skelly's Karch "A" 5, sw se ne 24-6s-10e, T. S. 2256-73 ft, Pales. 2073-82 ft, td 2274 ft, 76 bbls oil. Gulf's Moore 2, nw sw nw 12-7s-8e, Waltersburg 2183-2194 ft, td 2913 ft, 184 bbls oil. Cities Service's Mount 5, nw nw nw 12-7s-8e, Bethel 2732-2760 ft, td 2760 ft, 115 bbls oil. Carter's Edwards 1, se sw ne 15-7s-8e, Waltersburg 2141-2166 ft, td 2166 ft, 462 bbls oil.

White County: Wildcat—Cherry & Kidd's Pearce 1, ne se ne 35-6s-10e, abnd 2265 ft.

OLD WELLS DEEPENED

Champaign County: Wildcat — Burher & Sievers' Lindsey 1, c nw se 20-20n-8e, abnd 1777 ft.

Marion County—Texas Co.'s C. Reed "B" 7, nw nw se 31-2n-2e, Trenton 4545-57 ft, 4595-4625 ft, td 4645 ft, 50 bbls oil.

WILDCAT STARTS

Bond County—E. J. Hubbert et al's Shideler 2, nw nw se 8-6n-4w, lcn.

Franklin County—Paul Moseback's Sanders 1, se sw se 23-6s-2e, dr. Basin Drlg Co. et al's Buhamel 1, ne nw sw 20-6s-2e, dr.

Jasper County—Paul Johnson's Black & Ward 1, w½ ne ne 14-5n-10e, lcn.

Marion County—National Pet. Co.'s Lindley 1, e½ ne sw 22-2n-4e, lcn.

Richland County—Olson Drlg. Co.'s Boyd 1, w½ sw sw 1-3n-10e, dr.

St. Clair County—Ohio Oil Co.'s Fingerlin 1, ne se nw 26-2s-8w, lcn.

Washington County—Brouk's Kozuszek 1, ne se se 23-3s-2w, lcn. R. S. Hayes et al's Vaughn 1, ne ne ne 21-3s-8e, dr.

Wayne County—R. S. Hayes' Towne 1, e½ se ne 18-1n-7e, dr. Unknown's Crumbacker 1, s½ ne se 9-1s-5e, lcn.

White County—Stilley & Hompton's Ramming 1, se se se 17-4s-9e, lcn.

Indiana

Gibson County Well Has McClosky Showing

Maner Graham's Archie Thompson 1, C N½ SW SW 11-3s-12w, mile southwest of Owensville, Gibson County, appeared to be a McClosky pool-opener, after swabbing 7 barrels of oil an hour before casing break necessited cement squeeze job. Hole was bottomed at 2685

Summary of Drilling Operations in the United States Week Ended January 17, 1942

	WELLS COMPLETED						
	Completions	Oil Wells	Gas Wells	Failures	†Miscellaneous	Total 1942	Total This Date 1941
Alabama	1	.....	.....	1	.....	1	.....
Arkansas	1	1	.....	.....	.....	5	11
California	27	24	2	1	.....	67	69
Illinois	68	41	.....	25	2	199	183
Indiana	.....	.....	.....	.....	.....	19	28
Kansas	33	20	1	10	2	134	102
Kentucky	.....	.....	.....	.....	.....	11	14
Louisiana	28	16	.....	12	.....	81	66
Michigan	14	6	1	7	.....	51	46
Mississippi	18	10	.....	8	.....	18	7
Missouri	.....	.....	.....	.....	.....	.....	4
Montana	7	5	.....	2	.....	11	8
Nebraska	3	2	.....	1	.....	3	10
New Mexico	12	8	1	3	.....	19	17
New York	34	21	.....	.....	13	69	31
Ohio	15	4	5	6	.....	80	78
Oklahoma	34	22	2	6	4	115	120
Pennsylvania	7	.....	6	1	.....	15	189
Texas	189	136	9	39	5	526	422
West Virginia	11	2	7	2	.....	46	44
Wyoming	4	4	.....	.....	.....	5	4
Total this week	506	322	34	124	26	1,475	1,453
Total last week	450	302	18	104	26	969	925
Total this year	1,475	921	120	346	88	.....	.....

† Includes old wells deepened, water-intake, gas input, and salt water disposal wells.

ft, perforated in McClosky at 2539-44 ft.

Posey County: Between New Harmony and Poseyville, K. B. Yost and Burr Lambert's Fred Pfister 1, C N½ NE SW 23-4s-13w, was abandoned at 3023 ft. No shows were reported at any depth. Drilling ahead after temporary shut-down at 1971 feet was Ru-Mar Drilling Company's Morlock 1, NW SE NW 26-7s-14w. A slight, non-commercial show was reported in the Waltersburg sand.

Oklahoma

Apache Field Production Extended Southwest

Twelfth and thirteenth producers added Apache field, one extends area southwest; Navina area's dry hole reputation may be upset by smaller producer; Comanche County wildcat cores oil-stained sand; 1 mi extension of Hotulke pool may link it with West Hotulke.

Caddo County: Texas Co.'s Smith 8, SW NE NW 2-5n-12w, twelfth producer for Apache field, completes drilling on discovery lease, well drilled to 3721 ft in Wilcox sand, washed in and flowed 345 bbls oil in 1 hr through casing, then 151 bbls through 1-in tubing choke. Amerada Petroleum Corp.'s To-who 1, NE NW SW Section 2, extends pool southwest, well topped Wilcox 3463 ft, drilled to 3761 ft, flowed 308 bbls oil in 1½ hrs through 1-in tubing choke; cored thickest sand section in field to date. Texas Co.'s Mulkahay 6, NE SE SE Section 2, on southeastern flank, blew out of control at 2400 ft with 15 million gas, shut in after 4 hrs.

Logan County: Cities Service Oil Co.'s Babcock 1, SE NE NE 10-15n-4w, on condemned Navina structure, drilled to 6801 ft in unproductive Wilcox sand, plugged back 5010-43 ft in Layton sand, tested 1.25 million gas with spray of oil, set casing, now waiting. Sunray Oil Co.'s Donoghue 8, SW SE SE 7-17n-1w, southeastern flank of Guthrie field, drilled to 5435 ft in Wilcox sand, tested small amount of oil and water, to retest.

Comanche County: Texas Co.'s Reich 1, NW NW NE 25-4n-11w, wildcat near Elgin, cored 2313-23 ft, recovered 4 ft sand with oil stains and gas odor, drilling ahead.

Pottawatomie County: Atlantic Refining Co.'s Rowlett 1, SW NE SW 23-9n-4e, extended Hotulke pool 1 mi west and may indicate future connection of multi-zoned area with West Hotulke, well drilled to wet Wilcox sand, plugged back, perforated with 33 shots, 4303-20 ft in Hunton lime, acidized 5000 gals, pumped 237 bbls oil in 24 hrs, extreme east oil well in West Hotulke pool less than 1 mile from new extension.

COMPLETIONS

Caddo County: Apache—Texas Co.'s Smith 6, sw nw nw 2-5-12w, Bromide 3415 ft, td 3570 ft, flow thru 3-in csg, 9600 bbls oil and 4,000,000 gas.

Caddo County: Wildcat—Keener Oil & Gas Co.'s Norton 1-A, ne ne nw 6-9n-10e, Booch 2580 ft, Glic. 2782 ft, Cromwell 3290 ft, Mayes 3700 ft, Wood. 3784 ft, Miss. 3805 ft, Hunton 3810 ft, td 3874 ft, show oil in Hunton, perf hole full water, pb 3380 ft, shot 90 qts 3290-3355 ft, shot 90 qts, no results, plug 2645 ft, cem 90 sacks, pb 2610, shot 30 qts 2580-2600 ft, est 4,000,000 gas, spray wtr.

Carter County: Tussy—Phillips' McCrory 2, nw ne se 5-1s-3w, Tussy lime 2746-56 ft, Tussy sand 2840-68 ft, td 2920 ft, perf csg, pump 140.4 bbls oil.

Creek County: Nuyaka W.—Dunn & Miller's Nemeck 1, ne se se 33-14n-10e, Wilcox 3383 ft, abnd 3390 ft.

Creek County: Wildcat — Anderson-Prichard's Woods 1, ne ne se 18-15n-7e, abnd.

Jackson County: Altus—J. F. Badger et al's Elliott 1, c ne ne ne 5-1n-20w, Granite 2707½, abnd 2707½ ft.

Jefferson County: Oscar — Seitz-Comegys-Seity-Barrett 2, cse se se 14-6s-6w, sand 1809-18 ft, td 1815 ft, pump 56 bbls oil.

Lincoln County: N. Davenport—Dunnett's Smith 1, se sw se 29-15n-5e, Verdigris 3582 ft, abnd 3585 ft.

Muskogee County: Link—Link Oil's Rowsey 1, nw nw nw se 28-15n-15e, sand 1899-1935 ft, td 2120 ft, pb 1935 ft, perf, pump 95 bbls oil.

Okfuskee County: Unnamed—Shell's Palmer 2, nw nw sw 6-10n-9e, sand 3013-3026 ft, td 3033 ft, shot 30 qts, pump 80 bbls oil 168 bbls water.

Okfuskee County: E. Cromwell—Shell's Van Pelt 8, sw sw nw 35-11n-8e, Cromwell 3410 ft, td 3449 ft, flow 412 bbls oil.

Okfuskee County: E. Okemah — Sunray's Curry 1, ne ne se 3-11n-10e, Cromwell 3366 ft, abnd 3408 ft.

Okfuskee County: Dill—Phillips' Replogle 5, se nw nw 26-12n-8e, upper Viola 3689 ft, td 3702 ft, Cromwell 3694 ft, pb 3697 ft, pump 27 bbls oil, water.

Oklahoma County: Oklahoma City—Phillips' Murblanch 1, se c sw sw 22-12n-3w, Wilcox 6470 ft, td 6547 ft, shot 150 qts, pump 510 bbls oil. C. Pepper's Fee 1, ne nw se sw 27-12n-3w, Wilcox 6524 ft, td 6569 ft, shot 160 qts, pump 248 bbls oil. Sunray's Jones-Harn 4, sw nw se nw 27-12n-3w, Wilcox 6485 ft, td 6555 ft, shot 100 qts, pump 209 bbls oil, 58 bbls water.

Osage County: Wildcat — Cities Service's Osage 1, 10-23n-7e, Oswego 2270 ft, Skinner 2390-2400 ft, dry.

Pittsburg County: Wildcat—Public Serv. of Okla.'s Choctaw Tribal Land 1, se se ne 9-4n-16e, Hartshorn 1204-80 ft, td 1630 ft, pb 1280 ft, shot 400 qts, 1.9 gas, 385 rock pressure.

Pottawatomie County: South Konawa — Champlin's Luper 1, sw se nw se 4-5n-5e, Hunton 2666 ft, td 3128 ft, pb 2800 ft, 2000 gals acid, pump 32 bbls oil, 15 bbls water. Oils Inc., Walker 5, sw se sw 9-5n-5e, Hunton 2160 ft, td 2414 ft, 3000 gals acid, pumped 20 bbls oil.

Pottawatomie County: Maud—Kerlyn's Kirk 1, nw ne sw 1-8n-4e, Hunton 4101 ft, pay 4140-65 ft, td 4534 ft, pb 4175 ft, rlp csg 1000 gals acid, pump 200 bbls oil 6 bbls water.

Pottawatomie County: Romulus — J. F. Smith's Booze 2, ne se se 31-8n-4e, Hunton 3894 ft, td 3917 ft, 5000 gals acid, flow 131 bbls oil.

Pottawatomie County: Hotulke — Olson Drlg.'s Hollingsworth 1, c ne sw 24-9n-4e, Hunton 4155 ft, td 4167 ft, 5000 gals acid flow 480 bbls oil. Mudge Oil's Bowling 3, c ne nw 25-9n-4e, Hunton 4145 ft, td 4370 ft, 5000 gals acid, perf csg, pump 45 bbls oil and 125 bbls water. W. O. Allen's Webber 1, ne ne ne 27-9n-4e, Hunton 4165 ft, Viola 4320 ft, td 4545 ft, pb 4250 ft, 6000 gals acid, perf csg, 200 bbls oil.

Stephens County: Velma—Skelly's Frensley 2, c sw nw nw 36-1s-5w, sand 788-808 ft, 813-22 ft, 830-40 ft, 847-52 ft, td 852 ft, shot 30 qts, pump 32 bbls oil.

Stephens County: Empire—Cities Service's Surber 34, ne nw se sw 33-1s-8w, sand 2312-26 ft, pay 2219-45 ft, td 2350 ft, perf csg, pump 272.92 bbls oil. W. L. Winkler et al's Bullard 1, c ne ne ne 34-1s-8w, sand & shale 1704-90 ft, abnd 2657 ft. J. E. Jackson's Dilley 3, c nw se se 6-3s-5w, lime 1040-60 ft, sandy lime 1155-35 ft, sand 1170-88 ft, sand 1218-31 ft, td 1231 ft, perf csg, shot 15 qts, pump 15 bbls oil. J. E. Jackson's Dilley 4, c se se se 6-3s-5w, sand 1032-55 ft, td 1237 ft, pb 1055 ft, pump 10 bbls oil.

Stephens County: Wildcat—Winkler & Carl Carter's Peck 1A, ne se ne nw 1-3s-6w, sand 1050-67 ft, sand 1188-1220 ft, td 1550 ft, pb 1260 ft, 3200 gals acid, perf csg, flowed 75 bbls oil, 15,000,000 gas, 500 lbs shut in pressure.

OLD WELLS DEEPENED

Grady County: Knox—J. H. Graham's Cochran 1; sw sw se 27-3n-5w, otd 1463 ft, td 1550 ft, sand 1472-1504 ft, broken sand 1514-1528 ft, pump 10 bbls oil 3 bbls water.

Okfuskee County: N. Castle—Texas Co.'s McKernan 1, c n½ nw sw 15-12-9e, otd 3304, td 3322 ft, shot 30 qts, 140 bbls oil.

Pottawatomie County: St. Louis — Elio's Milburn 1, se nw nw 15-7n-4e, otd 3545 ft, sand 4150-70 ft, sand 4190-97 ft, td 4298 ft, 800 gals acid, pump 215 bbls oil 500 bbls water.

Stephens County: Empire—O. M. Pierce's Burke 4, sw ne sw ne 34-1s-8w, otd 1683, sand 1955-75 ft, pay 1952-57 ft, perf csg, pump 15 bbls oil and 1 bbl water.

WILDCAT STARTS

Greer County—E. L. Lippert's Crisp 1, c se se nw 26-4n-22w, lcn.

Harmon County—E. L. Lippert's Hart 1, ne ne ne 24-5n-26w, mchn.

Kiowa County — Rhinehart-Donovan's Ill. Life Ins. Co. 1, nw nw nw 14-6n-18w, dr. Beckwith & Houston's Hipps 2, nw se nw 4-6n-16w, spudded.

Okfuskee County—A. J. Peters' Brown 1, se nw ne 7-13n-7e, dr.

Texas County—Peerless Oil & Gas' Woodward 1, c ne 3-5n-18e, lcn.

Kansas

Peace Creek Well Showing Good Possibilities

New discovery for prolific Peace Creek area is apparent. Semi-wildcat opens Kraft-Prusa east field. Stafford County wildcat cores saturation, may open new producing area. New discovery well between Silica and Eberhardt pools.

Reno County: Simpson et al's Hollenbeck 1, NE SE NW 28-23s-10w, may open Peace Creek south, well drilled to 3801 ft in Viola lime topped at 3791 ft, drilled out plug, acidized 500 gals, made 18 bbls oil per hr natural, taking potential.

Barton County: J. J. Lynn's Kraft 1, C S½ SE NW 36-16s-11w, has opened the Kraft-Prusa East pool, well drilled to 3370 ft in Arbuckle lime topped at 3357 ft, acidized with 2000 gals and was good for a physical potential of 544 bbls daily of 42-gr oil on pump.

Stafford County: A. M. Austin et al's Ira 1, NEc SE 13-21s-11w, 2½ mi east of Snider South pool, cored 3368-77 ft in Simpson series topped at 3369 ft, recovered good saturated section, running casing on top of zone for test.

Silica-Eberhardt: Ash and Hershey's Roth 1, midway between Silica and Eberhardt pools, Barton County, filled 2400 ft with oil after drilling out plug to 3333 ft in Arbuckle dolomite topped at 3292 ft, swabbing and testing for potential, may open new producing area.

COMPLETIONS

Barber County: Wildcat—Deep Rock's Skinner 1, c e½ nw sw 21-31s-14w, Viola 4531 ft, Arb. 4773-4780 ft, 4780 td, no show, 84 shots 4527-50 ft, 10,000 acid, 3.4 bbls fluid per hr, 50 percent water, swab 31 bbls oil and 31 bbls water per day, cement to 4225 ft, 16 shots, set plug 4662, 54 shots 4661-95 ft, acid 8000 gals, swab 40 bbls oil and 30 bbls water per day, completed for 41 bbls oil, 20 bbls water.

Barton County: Trapp—Shell's Schneider "C" 5, sw se ne 2-16s-14w, Arbuckle 3293 ft, td 3309 ft, 3000 gals acid, 593 bbls oil and 34 bbls water.

Barton County: Kraft—Lauck & Moncrief's Riemann 2, c s½ nw sw 10-17s-11w, Arbuckle 3314 ft, abnd 3340 ft.

Barton County: Silica—Iron Drlg. et al's Bacon 1, c s½ sw sw 8-20s-11w, Arbuckle 3290 ft, td 3315 ft, 2000 gals acid, pumped 447 bbls oil.

Butler County: Eldorado—Cities Service's Wilson 210, sw ne sw 8-25s-5e, Kansas City 1958 ft, td 2025 ft, 2000 gals acid, pumped 17 bbls oil and 40 bbls water. Cities Service's Pierpont 87, se se nw 33-25s-5e, Kansas City 1949 ft, td 2000 ft, 2000 gals acid, pumped 5 bbls oil and 95 bbls water.

Butler County: Haverhill—S. E. Duncan et al's Reetz Estate 1-A, ne nw sw se 34-27s-5e, Viola 3113 ft, td 3123 ft, est pump 35 bbls oil with show water.

Cowley County: Couch—Leavell Oil's Kennedy 1, ne nw sw 12-30s-5e, Bartlesville 2825 ft, td 2843 ft, 1548 bbls oil.

Cowley County: Frog Hollow — Leader-Zephyr's Moon 10, nw sw sw 16-32s-5e, Bartlesville 3029 ft, td 3065 ft, shot 60 qts, 956 bbls oil.

Cowley County: Wildcat—Trees Oil Co.'s Deichman 1, nw nw sw 24-31s-4e, Lansing 2325 ft, show gas 2547-54 ft, Bartlesville 2835 ft, flow 40 bbls oil 6 hrs, td 2845 ft, 795 bbls oil, gravity 42.6.

Ellis County: Bemis—Sinclair Prairie's Slimmer 4, se sw sw 19-11s-16w, Arbuckle 3330 ft, td 3337 ft, 1000 gals acid, pumped 750 bbls oil.

Ellis County: Burnett—Dickey's Carmichael D-3, c w½ se sw 8-11s-17w, Arbuckle 3370 ft, td 3376 ft, 3500 gals acid, pumped 69 bbls oil.

Ellis County: Marshall—Aylward's Meis 4, c e½ nw nw 6-12s-17w, Arbuckle 3672 ft, td 3679 ft, 5000 gals acid, pumped 960 bbls oil.

Ellis County: Sugar Loaf—Derby et al's Miller 2, c n½ sw sw 17-13s-17w, abnd 3704 ft.

Ellsworth County: Wilkens—Derby's Peterman 2, c e½ se 11-17s-10w, abnd 3303 ft.

Ellsworth County: Bloomer—Gulf's Grizzell 11, c s½ se ne 31-17s-10w, Arbuckle 3222 ft, td 3229 ft, 3000 bbls oil.

Graham County: Morrel—Continental's Trexler 2, nw sw nw 15-9s-21w, Arbuckle 3669 ft,

td 3701 ft, 3000 gals of acid, potential 1551 bbls oil.

Greenwood County: Unnamed—F. A. Gillespie & Son's Curry 1, ne nw ne 5-22s-1e, td 1880 ft, pb 1869 ft, water, abnd.

Greenwood County: Severy—Page & Cook's Hebb 3, sw ne ne 8-28s-11e, Kansas City 1195 ft, abnd 1233 ft, Jack Ray et al's Miller 1, nw nw se 8-28s-11e, Kansas City 1097 ft, td 1222 ft, pay 1218-1222 ft, 5 bbls oil.

Jefferson County: McLouth—Willard Archie et al's Schrader 2, c sw sw 28-9s-20e, Miss. Lime 1419 ft, abnd 1595 ft.

McPherson County: Ritz-Canton—Nadel et al's Thompson 1, se ne sw 26-9s-2w, Miss. Lime 2906 ft, td 2928 ft, Pay 2943-2953 ft, pumped 10 bbls oil and 75 bbls water.

McPherson County: Voshell—Shell's Koehn 5, c w½ sw ne 16-21s-3w, Simpson 3352 ft, sand 3358 ft, td 3380 ft, shot 10 qts, pumped 138 bbls oil.

Norton County: Wildcat — Helmerich & Payne et al's Conway 1, c se ne 7-3s-23w, Anhy. 1915 ft, Topeka 3227 ft, Lansing 3376 ft, soft zone 3550-54 ft, stain 3426-31 ft, 3438-42 ft, 3465-67 ft, 3530-36 ft, and 3550-54 ft, Base K. C. 3590 ft, Granite Wash 3623 ft, Granite 3635-40 ft, abnd 3640 ft.

Pratt County: Wildcat—Falcon-Seaboard et al's Randel 1, c e½ se ne 28-28s-13w, Miss. 4309 ft, Viola 4350 ft, Simp. shale 4425 ft, Simp. dolo. 4430 ft, show oil 4437 ft, cored 4437-41 ft, hard dolo., Arbuckle 4512 ft, td 4660, pb 4600 ft, drill stem test 4510-4600 ft, 570 ft rotary mud, set packer 4419 ft, 180 ft mud, set plug 4428 ft, packer 4350 ft, open 31 min. 240 ft mud, pb 4597, 3000 ft water in hole. bail water, plug 4470 ft, shot, pb 4420 ft, 1350 gals acid, abnd.

Pratt County: Cunningham—Sam Springer's Sitton 2, c n½ se nw 35-27s-11w, Lansing 3461 ft, td 3550 ft, perf 5000 gals acid, pumped 656 bbls oil.

Reno County: Peace Creek—Cities Service's Kreie B-3, ne sw se 21-23s-10w, Viola 3774 ft, td 3781 ft, flow 23 bbls oil per hr, 500 gals acid, potential 3000 bbls oil.

Rice County: Eberhart—Cities Service's Doll 1, c w½ sw nw 19-19s-10w, Lansing 3002 ft, td 3365 ft, pb 3093 ft, perf csg 1000 gals acid, 3.047 mil gas, 900 lbs rock pressure.

Russell County: Hall Gurney—Phil-Han's Letsch 8, c n½ ne nw 34-14s-13w, Lansing 2845 ft, td 2874 ft, 4000 gals acid, 875 bbls oil pump.

Russell County: South Big Creek—H. T. Bennett's Mitchell 1, c w½ nw se 6-15s-14w, Lansing 2930 ft, td 2974 ft, pay 2961-65 ft, jet acid 500 gals, 2000 gals acid, pump 89 bbls oil.

Russell County: Trapp—Cities Service's Mai A-6, c e½ ne sw 24-15s-14w, Arbuckle 3350 ft, td 3355 ft, 600 gals acid, potential 928 bbls oil.

Russell County: Wildcats—M. B. Amer, Inc.'s Gregory 1, sw sw sw 23-14s-12w, Anhy. 605 ft, show gas 1450-60 ft, Ft. Riley 1525 ft, Florence 1630 ft, Wreford 1705 ft, Cottonwood 1850 ft, Neva 1895 ft, Topeka 2548 ft, Lansing 2904 ft. Congl. 2314 ft, Arb. 3251 ft, hole full water 3260-65 ft, abnd 3265 ft. Central Pet.'s Ney 1, ne ne nw 2-15s-12w, Anhy. 585 ft, Ft. Riley 1485 ft, Florence 1580 ft, Wreford 1658 ft, Cottonwood 1795 ft, Neva 1845 ft, Topeka 2495 ft, Dodge 2756 ft, Lansing 2840 ft, Congl. 3139 ft, Arbuckle 3194-3214 ft, abnd 3214 ft, 300 ft water in hole.

Stafford County: Kipp—Skelly et al's Kipp E-3, c s½ nw nw 26-25s-14w, Lansing 3705 ft, td 3900 ft, 2000 gals acid flow and pump 2051 bbls oil.

OLD WELLS DEEPENED

Cowley County: Unnamed—Ralph Wixon et al's Clover 1, c se se 8-31s-7e, otd 1463, Kansas City 2010 ft, abnd 2012 ft.

Russell County: Vaughn—Cities Service's Vaughn 5, nw nw sw 17-14s-14w, otd 3069 ft, Lansing 3025 ft, td 3117 ft, 4000 gals acid, potential 860 bbls oil and 75 bbls water.

WILDCAT STARTS

Barton County—Helmerich & Payne's Ward 1, c e½ se ne 12-20s-13w, rr.

Chase County—Aladdin Pet. et al's Drummond 1, se se sw 15-20s-7e, dr.

Comanche County—Sinclair Prairie's Exchange Bank 1, se se sw 27-33s-19w, lcn.

Marion County—Veeder Supply's Williams 1, c n½ nw sw 35-17s-4e, woc.

Norton County—Helmerich & Payne et al's Voss 1, ne ne se 19-5s-21w, rur.

Nebraska

Third Oil Producer Completing at Dawson

Third producer added to Dawson pool, Ohio Oil Co. abandons Falls City location to conform to 40-acre spacing regulation, another oil well testing in Barada Pool.

Richardson County: A. H. Kruger et al's Ogle 1, C E½ NE SE 9-1n-14e, topped Hunton lime 2245 ft, drilled to 2268 ft, filled with 1100 ft oil and could not be bailed down; is third for Dawson pool. Ohio Oil Co.'s Sandrock 8, NW SW NW 20-1n-16e, Falls City pool, abandoned location after moving in rig to conform to new M-68 spacing order. Skelly Oil Co.'s Zimmerman 1, C W½ SE SW 36-3n-16e, the Barada pool, testing and swabbing after drilling out cement plug to 2490 ft in Hunton lime topped at 2454 ft. Davisson & Goodenkauf's Schawang 1, 34-3n-16e, 1 mi west of the field, moving in.

COMPLETIONS

Richardson County: Wildcat—Richico Oil's Dowell 1, c w½ nw ne 31-2n-15e, Hunton 2648 ft. abnd 2885 ft.

Richardson County: Barada—Skelly's Merz 1, c e½ ne ne 35-3n-16e, Hunton 2438 ft, td 2505 ft, pumped 164 bbls oil; Roesch 4, c w½ nw nw 36-3n-16e, Hunton 2374 ft, td 2510 ft, perf csg, pumped 242 bbls oil.

South Dakota

Six Tests Planned for Early Drilling; Much Leasing

At least six locations in South Dakota soon are to be tested for oil. Work has started on three wells in western South Dakota and plans for three others, two in the central part of the state and one near the western border, have been announced.

The tests follow two years of leasing and geophysical surveys. More than four million acres are under lease.

More exploratory work was reported taking place in the state during the past fall and early winter than at any time since the beginning of the current oil play, according to Millard G. Scott, director of the State Rural Credits department, which has leased more than a million acres of land.

The latest well development is underway in Fall River County, in the southwest corner of the state, where a group of Denver operators, headed by L. V. Garverich, are drilling on a 2800-acre lease belonging to the Rural Credits department. This location is near the town of Rumford and on Hat Creek structure, an extension of the Chilson anticline. Several shallow tests have been drilled in the vicinity.

A good showing of oil and heavy pressure is reported in a test drilling below 500 feet in the Black Gap area, southeast of Rapid City, 70 miles north of Rumford. Little information has been given out.

The well is being drilled by Lem Johnson of Newcastle, Wyo., for a Rapid City group who hold leases on 30 sections. Under present plans it will be carried to the Minnelusa sand, expected around 3000 feet.

Drilling has also been started on the Belle Brink structure in the Elbo-Bend area near Belle Fourche, 60 miles northwest of Rapid City, where Adolph Amunson and Martin J. O'Brien of Newell are drilling a shallow test on the George Stetter farm. Projected depth is 1500 to 2000 feet.

Central South Dakota Oil & Development Co. has completed details for drilling on a 40,000-acre block in the vicinity of Canning, 12 miles east of Pierre, in Hughes County, central South Dakota.

In Corson County, north central South Dakota, The Carter Oil Co. has more than 25,000 acres under lease after adding 10,000 acres to its holdings this fall.

The sixth well in the state may be drilled near Newell in Butte County, 25 miles north of Belle Fourche, where negotiations are underway between Two-Top Gas & Oil Co., which holds leases on 30,000 acres, and J. L. Williams and Robert Atkinson, Jr., of St. Joseph, Mo., drilling contractors. Two drilling attempts have been made on the Two-Top structure. The first hole was put down 1100 feet where gas was found. A second well was undertaken but the well was never finished. Under the proposed new drilling agreement the Missouri contractors would make a 3800-foot test through the Sundance sandstone. A geophysical survey of the structure was completed last fell.

Recent leasing in the state include the leasing of 77,800 acres of rural credit land in Meade County to The Carter Oil Co.; the paying of lease rentals on large blocks in Stanley County by the Magnolia Petroleum Co., indicating continued interest in that area; leasing of 4280 acres of rural credit land in Haakon County to L. S. Youngblood of Oklahoma City; application for extensive leases of state land to Faulk, McPherson, Edmunds, Jerauld and Buffalo counties to R. W. Gardner of Oklahoma City, and in Brule, Charles Mix, Aurora, Davison, Sanborn and Miner counties to J. K. Davis, also of Oklahoma City.

New Mexico

Lea County Strike Marks New Trend

Shallow oil strike in Western Lea County heralds new production trend. Nitro shot scheduled for prospect between Maljamar and Vacuum fields.

Lea County: Culbertson & Irwin, Inc. and Southern California Petroleum Corporation's Lynch-Texaco 1, C SW SW 21-19s-32e, filled 2400 feet with oil in 22 hours after drilling sandy-lime pay 2740-51 ft. Operations were halted to run pipe for completion. This strike is 4 miles north of Halfway 9-well pool, and involves same type of structure to indicate a new production trend. Logged base of salt 2375 ft, with elevation 3580 ft, and top brown lime and Yates at 2415 ft and 2550 ft, respectively.

Phillips Petroleum Co.'s State-Philmex 1, C NW NW 28-17s-33e, 3 miles east of Maljamar field, yielded small amount free oil on swabbing test after drilling plugs from 5½-inch at 4545 ft, and was awaiting nitro shot. Production from broken lime 4584-92 ft, elevation 4189 ft.

Prexy Wilson et al's Saunders 1, C SE SE 11-25s-35e, 6 miles west of Jal field, drilling 1400 ft in salt, topped at 990 ft, elevation 3185 ft.

COMPLETIONS

Eddy County—Dixon-Yates et al's Saunders 5-A, ne sw ne 12-18s-29e, junked 2742 ft. J. H. Elder et al's Root 6, c se nw 12-17s-29e, flowed 130 bbls ⅜-in, shot 300 qts 2593-2670 ft. Hadlock et al's State 1, swc nw 26-17s-27e, flowed 88 bbls 2-in, natural sand 436-63 ft. Paton Bros. et al's Magruder 4, sw se se 35-17s-27e, pumped 150 bbls, acidized 1000 gals 480-504 ft.

Lea County: Eaves—Stanolind's Farnsworth 4-B, c nw se 18-26s-37e, abnd 3245 ft.

Lea County, West Eunice—Wilson Oil Co.'s State 6, c ne se 13-21s-34e, abnd sul w 3890-95 ft.

Lea County: Lynn — Western Gas Co.'s Combest 1-X, c se ne 35-23s-36e, flowed 120 bbls ¼-in natural, sandy-lime 3520-45 and 3568-76 ft, td 3579 ft.

Lea County: Maljamar—Barney Cockburn

et al's State-Westall 1, c nw nw 36-17s-32e, new deep pay, pumped 49 bbls 39.8-gr oil, shot 260 qts 4635-4715 ft, pay 4635-4712 ft. A. H. Hover et al's State 3, c nw nw 32-17s-32e, flowed 65 bbls 2-in, acidized 4500 gals and shot 295 qts 3880-4040 ft, td 4150 ft. W. J. Rutledge, Jr. et al's State-Texaco 4-O, c se nw 16-17s-32e, 17,560,000 ft of 640 BTU sweet gas cas, shot 50 qts 3140-60 ft, pb from 3762 ft.

Lea County: Salt Lake—Harry Leonard & Van Welch's State 4, c se nw 18-20s-33e, pumped 212 bbls natural, lime 2989-3004 ft.

Lea County: Skelly—C. E. Willingham et al's State-Shell 1, nec 32-22s-37e, flowed 65 bbls 5/16-in, shot 440 qts 3555-3670 ft, td 3697 ft.

WILDCAT STARTS

Chaves County—Brewer Drlg. Co. et al's State 1, c ne sw 15-14s-29e, mim.

Government Asking Bids For Montana Royalty Oil

Proposals for the purchase of royalty oil from leases on government land in the Cat Creek, Montana, field have been invited by the Interior Department, to be opened January 21.

Bids have been asked for periods of one, three or five years, beginning February 1, 1942, the amount of oil available being approximately 15,000 barrels a year.

The oil now is being taken by Continental Oil Company under a five-year contract which will expire at the end of the next month at a price of $1.56 per barrel, which is 31 cents above the Mid-Continent price of $1.25 for 40° gravity or above, and 41 cents above the Cat Creek field price. The Cat Creek oil ranges from 49° to 50° API.

There are 11 federal leases located on the public lands in the field.

West Texas

Abell Field Has New Oil Pay in Permian

Deepening operations scheduled for wildcat failures in regular Permian zones in general vicinity of Andrews County oil discovery in Clear Fork lime. Hockley County lists pair wildcat failures. Abell field has new oil pay in Permian.

Andrews County: Adequate financial support to assure immediate deepening to Clear Fork zone of two regular Permian failures with similar deals pending on other known "highs" near Andrews-Gaines County line. This action taken after Fullerton Oil Company's Wilson 1, NE SW SE PSL 15, Blk A-32, flowed rate 30 to 40 bbls 37.6-gravity oil hourly when tester used at 7222-7324 ft. Drill-stem test 7324-92 ft yielded gas-cut mud, and first sulphur water in Clear Fork encountered at 7462 ft. Later drill-stem tests 7392-7560 and 7581-7659 ft accounted for 6300 ft and 6130 ft of sulphur water, respectively, besides 540 ft of rotary mud on each test. Drilling has progressed to 7710 ft, as the prospect is due to fulfill 8000-ft depth contract before setting casing. Top San Andres lime logged at 4470 ft, elevation 3382 ft.

Wildcat Failures: Stanolind's Williams 1, 18 miles north and 5 miles east of Slaughter field, Hockley County, abandoned 6500 ft, having no shows in San Andres, topped 3652 ft, elevation 3514 ft, or in Clear Fork series. Tide Water Associated Oil Co.'s Commerce Trust 1, 3 miles northeast of Slaughter field, abandoned 5201 ft, top San Andres 4210 ft, elevation 3513 ft. In Gaines County, Amerada's Hudson 1, 3 miles west of Wasson production, abandoned 5036 ft, having tested small volume oil with water 4952-5000 ft after nitro shot and acid. Top San Andres 4560 ft, elevation 3616 ft. In Yoakum County, Sinclair Prairie's Kleiner 1, 3½ miles northwest of Ownby sector of Waples-Platter pool, abandoned 5600 ft after showing for submarginal well. Top San Andres 4710 ft, elevation 3630 ft.

Wildcats: Geo. P. Livermore's Moxley 1, Clear Fork project for southwestern Lubbock County, drilling dry lime 4110 ft, topped San Andres 3890 ft, elevation 3302 ft. In Briscoe County, Phillips Petroleum Co.'s Montague 1, C NW NE AB&M 6, Blk B-4, lost circulation in dolomite 6570 ft in unidentified Ordovician section. Shell's Sealy-Smith 1, northeastern Ward County Ordovician project, drilling lime 8150 ft. Plymouth Oil Co.'s Alford 1, eastern Upton County wildcat, preparing drill plugs from 6½-in at 9750 ft, total depth 10,194 ft in Devonian, topped 10,018 ft, elevation 2669 ft.

Pecos County: Siemoneit Drilling Co.'s Walsh 1, Lot 11, H&GN 25, Blk 9, southeast edge of Abell multi-pay field, and originally the first gas completion in Simpson at 4989 ft, became first shallow oil producer in flowing 264 bbls 36-gravity oil natural ½-in from perforations 3350-70 ft in Permian. This edge producer also yields gas through bradenhead from 1600-ft Permian.

COMPLETIONS

Andrews County: Emma—Sinclair Prairie's Cowden 14, se ne se T&P 1, blk 44, T-2-N, flowed 1008 bbls 2-in, acidized 3000 gals 4180-4260 ft.

Cochran County: Slaughter — Anderson-Prichard Oil Corp.'s Neal 5, 440 ft from n and 2818 ft fr w lse, Refugio CSL leag 57, flowed 486 bbls cas, acidized 10,000 gals 4894-4948 ft; Neal 13, 440 ft from s and 1025 ft from e lse, flowed 393 bbls cas, acidized 10,000 gals 4900-44 ft. Honolulu Oil Corp.'s Igoe-Smith 16, lab 18, leag 56, flowed 899 bbls, acidized 10,000 gals 4983-5023 ft; Igoe-Smith 25, sec lab 4, leag 56, flowed 942 bbls, acidized 10,000 gals 4930-5030 ft; Igoe-Smith 26, nec lab 17, leag 56, flowed 1039 bbls, acidized 10,000 gals 5000-40 ft.

Crane County: Sand Hills—Magnolia's Lea 9, PSL sec 4, blk 32, flowed 162 bbls ½-in, acidized 4399-4710 ft.

Crockett County: Wildcat—Jacobs and Gibson Oil Corp.'s University 1, se nw se sec 5, blk 29, elev 2231 ft, abnd 1850 ft.

Crockett County: Crockett—Gilcrease Oil Co.'s University 14, ne nw nw sec 13, blk 14, flowed 100 bbls 2-in natural 1385-1436 ft.

Crosby County: Wildcat—Geo. Callihan-C. L. Wagner's Wahlenmaier 1, nec WTRy 4, blk D-15, A-417, elev 2655 ft, anhydrite 710 ft, Yates sand 1150 ft, San Andres 2117 ft, Clear Fork 3370 ft, abnd 4054 ft.

Dawson County: Albaugh—Ray Albaugh et al's Handley 1, c se sw ELRy 36, blk M, elev 3086 ft, anhydrite 2215 ft, salt 2290-2970 ft, Yates sand 3050 ft, grains 3060 ft, brown lime 4060 ft, San Andres 4580 ft, pumped 181 bbls 33.2-gr oil, plus 14% bs&w, shot 700 qts 4910-77 ft (old pool revived).

Ector County—Forest Dev. Corp.'s Moss 7-A, c nw sw T&P 42, blk 42, T-2-S, flowed 318 bbls 2-in, shot 429 qts 4070-4213 ft.

Ector County: North Cowden—Stanolind's Smith 4-F, nwc T&P 18, blk 42, T-1-S, pumped 59 bbls oil and 53 bbls water, shot 515 qts 4170-4376, td 4396 ft.

Gaines County: Cedar Lake—Stanolind's Johnson 4, c se ne D&W sec 6, blk H, swabbed 626 bbls, shot 840 qts 4630-4785 ft.

Gaines County: Seminole—H. W. Bass et al's Austin 8, c sw sw WTRy 194, blk G, flowed 658 bbls ½-in, shot 171 qts 5120-5234 ft.

Hockley County: Slaughter—Honolulu Oil Corp.'s Frazier 13, 2870 ft from s 440 ft from e PSL 10, blk X, flowed 2465 bbls 2-in, acidized 10,000 gals 4900-90 ft. Magnolia's Mallet 13-E, near c lab 19, leag 49, Scurry CSL, flowed 1450 bbls cas, acidized 10,500 gals, td 5030 ft; Mallet 14-E, swc lab 12, leag 49, Scurry CSL, flowed 1739 bbls cas, acidized 10,500 gals 5000-35 ft; Mallet 8-F, near c lab 7, leag 49, Edwards CSL, flowed 1475 bbls cas, acidized 10,500 gals 4963-5014 ft. Stanolind's Martin 1, sec lab 14, leag 42, Rains CSL, flowed 453 bbls, acidized 9000 gals 4845-4950 ft, Texas Co.'s Slaughter 87, nwc lab 79, leag 38, Zavalla CSL, flowed 1623 bbls cas, acidized 12,000 gals 4905-5000 ft, T. P. Coal & Oil Co.'s Graham 1, swc lab 38, leag 40, Maverick CSL, flowed 535 bbls 3-in, acidized 10,000 gals 4872-4970 ft; Lauhoff 5, sec lab 65, leag 39, Maverick CSL, flowed 635 bbls 3-in, acidized 10,000 gals 4955-99 ft.

Howard County—Sinclair Prairie's Dodge 76, sw se nw T&P 11, blk 30, T-1-S, flowed 223 bbls cas, shot 580 qts 2604-2790 ft, td 2800 ft.

Loving County: Wheat—H. W. Martin et al's Wheat-Ramsey 6, W&NW 83, blk 1, jkd 225 ft.

Pecos County: Abell—Anderson-Prichard-Stanolind's Wagner 1, c lot 14, H&GN 23, blk 9, flowed 141 bbls natural 15/64-in, Sharp perfs 5825-35 ft, td 5858 ft. Geo. Abell et al's Eaton 2, 990 ft from ne and 2310 ft from nw lines H&TC 5, blk 3, flowed 1514 bbls natural ½-in, McKee sand 5200-09 ft. Siemoneit Drlg. Co.'s Walsh-Myers 1, swc lot 11, H&GN 25, blk 9, new shallow pay for Abell, flowed 264 bbls 36-gr oil natural ½-in, Permian perforatoins 40 shots 3350-70 ft, td 4989 ft. Stanolind's Fogelman 1, c lot 5, H&GN 23, blk 9, flowed 1407 bbls ½-in natural, McKee sand perf 5329-34 ft, td 5354 ft; Rixse-Abell 1, Unit 2, c lot 7, H&GN 23, blk 9, flowed 2241 bbls natural ½-in, McKee sand perf 5425-32 ft, td 5452 ft.

Pecos County: Conry-Davis — Sinclair Prairie's Lutz 1, nw sw sw H&GN 32, blk 9, abnd 4000 ft.

Pecos County: Lehn—C. K. Drlg. Co.'s Lehn-Texaco 4, H&GN, sec 71, blk 10, abnd, shot 130 qts 1675-1725 ft, td 1747 ft.

Pecos County: Taylor-Link—J. D. Lancaster et al's University 2-A, nec se 26, blk 16, pumped 15 bbls oil and 30 bbls water, shot 60 qts 1700-24 ft, td 1732 ft, pb to 1727 ft.

Pecos County: Tobarg—Stanolind's Smith 15-B, TCRy, sec 104, abnd 577 ft.

Pecos County: Walker — Cheyenne Pet. Corp.'s White-Baker 2-A, sw nw GC&SF 87, blk 194, shot 70 qts 2126-66 ft, abnd.

Pecos County: White-Baker—Cardinal Oil Co.'s White-Baker 3-C, nw ne ne TCRy 44, blk Z, 2,360,000 ft gas open cas natural, lime 1660-1734 ft.

Scurry County: Northwest—P. J. Moran et al's Hardee 1, nwc ne H&TC 99, blk 97, pumped 37 bbls, shot 200 qts 1623-65 ft, td 1804 ft, pb to 1665 ft.

Upton County: McCamey—Shell's Baker 16, 2300 ft from nw and sw lines sec 8, blk R, E. C. Grooms sur, pumped 82 bbls, acidized 10,000 gals 2203-41 ft, td 2267 ft.

Winkler County: Emperor—Skelly's Halley 45, ne sw nw PSL 15, blk B-11, flowed 476 bbls ⅝-in, shot 265 qts 2747-2882 ft.

Winkler County: Hendrick—Bates-Reading Oil Corp.'s McCabe-Shell 9, sec w½ sw PSL 36, blk B-5, flowed 236 bbls ¾-in, shot 380 qts 2825-3005 ft. Stanolind-Westbrook-Thompson-Hold. Corp.'s Hendrick 3-T-G-88, near c se se PSL 28, blk B-5, flowed 59 bbls ¼-in, shot 225 qts 2907-3000 ft.

Winkler County: Keystone — Richardson Oils, Inc.'s Jenkins 2-A, 1320 ft from n and 440 ft from w of ne PSL 12, blk 77, flowed 280 bbls 1-in, shot 350 qts 3346-3460 ft; Jenkins-Conoco 7, c n½ n½ sw PSL 13, blk 77, flowed 322 bbls cas, shot 510 qts 3312-3496 ft; Jenkins-Southland 4, c s½ s½ nw PSL 13, blk 77, flowed 223 bbls 1-in, shot 380 qts 3311-3491 ft. Standard of Texas' Baird 61-18, nec n¾ PSL 18, blk B-3, flowed 308 bbls cas, shot 380 qts 3191-3351 ft; Baird 41-19, nec W-440-ac PSL 19, blk B-3, flowed 196 bbls cas, shot 290 qts 3280-3396 ft.

Yoakum County: Wildcat—Sinclair Prairie's Kleiner 1, nwc w½ sec 436, blk D, elev 3630 ft, anhydrite 2535 ft, Yates sand 3360 ft, brown lime 4320 ft, San Andres 4710 ft, abnd 5600 ft.

Yoakum County: Wasson—American Liberty-Atlantic's Futch-Texaco 6, c ne nw sec 796, flowed 420 bbls 2-in, acidized 10,000 gals 5060-5225 ft. Drl. & Exploration, Inc.'s Hudson-Shell 4-C, nw sw sec 834, flowed 414 bbls 7/16-in, acidized 8000 gals 4900-5100 ft; Randall-Humble 8-A, c se se sec 835, flowed 501 bbls plus 4.4% bs&w, 11/16-in, acidized 10,000 gals 4940-5110 ft. Humble's Randall 16, c nw ne sec 859, flowed 442 bbls 9/16-in, acidized 3000 gals 5010-5107 ft.

OLD WELL DEEPENED

Schleicher County: Wildcat—H. P. Opp et al's Jackson 1, nw ne TCRy sec 41, blk LL, otd 4081 ft, abnd 6155 ft.

WILDCAT STARTS

Dawson County—Magnolia's Scanlan 1, c se ne ELRy 113, blk M, lcn.

Pecos County—L. & W. Oil Co.'s University 1-D, c sw nw sec 27, blk 16, sp and sd.

Texas Drilling Permits

The Texas Railroad Commission last week approved permits for drilling 104 wells in Texas, an increase of 66 over the week before.

There were 28 permits granted in Southwest Texas, 24 in the Gulf Coast, 12 in West Central Texas, 13 in West Texas, 9 in the Panhandle and 13 in North Texas. Not as many as 10 permits were authorized in any single county.

Texas Panhandle

COMPLETIONS

Carson County—Federal Drlg. Co.'s Burnett 9, I&GN 115, blk 5, pumped 150 bbls, 3085-3100 ft. Skelly's Schafer 143, I&GN 197, blk 3, pumped 283 bbls, shot 450 qts 3015-3100 ft.

Gray County—Cities Service Oil Co.'s George 2, I&GN 151, blk 3, pumped 167 bbls, shot 200 qts lime 3178-3250 ft. Albert Crenshaw et al's Benton 8, I&GN 63, blk 3, pumped 108 bbls, shot 450 qts lime 3020-3127 ft, td 3136 ft. Drl. & Exploration's M. Leopold 10, I&GN 141, blk 3, pumped 191 bbls, shot 180 qts lime 3300-12 ft. King Oil Co.'s North Valmert 15, I&GN 140, blk 3, pumped 260 bbls, shot 140 qts 3238-81 ft. Skelly's Lovett 7, H&GN 36, blk B-2, pumped 108 bbls, shot 615 qts 2888-3002 ft. Stanolind's Lovett 2-B, H&GN 36, blk B-2, pumped 288 bbls, shot 285 qts 2925-3010 ft, td 3017 ft.

Hutchinson County—Danube Oil Corp.'s Starnes 6, TCRy 22, blk M-23, pumped 160 bbls, shot 200 qts 3075-3132 ft. Bob Murphy-United Products Co.'s Christian 2, sec 15, blk V, S. M. Hedgcock sur, pumped 238 bbls, 3108-71 ft. Phillips' Cockrell 90, D&SE 11, blk B-3, pumped 213 bbls, shot 500 qts 2838-3039 ft; Whittenburg 62, H&TC 58, blk 46, pumped 272 bbls, shot 420 qts 2787-2904 ft, td 2910 ft. Shell's W. R. Harvey 1, TCRy 16, blk M-21, pumped 182 bbls, shot 155 qts 3029-85 ft.

Moore County—Texoma Natural Gas Co.'s Coon 21-M, H&TC 107, blk 44, 12.8 gas, 383 lbs rock pressure, lime 2750-3035 ft, td 3175 ft.

Wheeler County—Smith Bros. Ref. Co.'s Binkley 1, H&GN 35, blk 24, pumped 22 bbls, granite wash 2490-2509 ft, td 2565 ft; Harlan 16, H&GN 49, blk 24, pumped 23 bbls, granite wash 2460-2569 ft.

North Texas

Strawn Discovery Looms For Archer County

Archer County has promise of Strawn discovery. Offset to Jack County discovery flowed natural on preliminary test, and county's year-end Strawn strike boosts its flow. Confirmation test for Burns-Wynn pool, Clay County, registers big flow. Antelope field lists first oil producer in Bend.

Archer County: Continental Oil Co.'s Ferguson 1, NW SE SP Ry. 9, A-417, midway between K-M-A and Hull-Silk fields, logged broken oil stain and porosity 4053-4180 ft in Strawn, topped 4038 ft. Drill-stem test 4063-77 ft yielded 60 ft oil-cut mud, and test at 4165-80 ft showed 110-ft gas-cut mud with trace oil. Coring resumed to explore the section, and test may be carried to Bend before running pipe.

Jack County: Anderson-Prichard Oil Corp.'s Hoefle-Conkling 1, north offset to Hoefle pool discovery, flowed 35 bbls oil one-hour test after cleaning. Production from lime 4856-70 ft, total depth 4883 ft in Bend, topped 4846 ft, slightly low. Hanlon & Buchanan's Hoefle 1-B, south offset discovery, preparing to test broken pay 4867-4906 ft, and Hoefle 1-C drilling 3010 ft.

Roeser & Pendleton's Webb 1, J. E. Middleton Survey, Jack County wildcat that was showing for discovery at close of year, flowed 76 bbls oil and 101 bbls water in 21½ hours and next day flowed 61 bbls oil and 90 bbls water in 18 hours. Production from about 12 ft broken Strawn sand, topped 2882 ft, total depth 2933 ft. Sinclair Refining Company completed 8000-ft 4-inch pipe line extension to buy this 44-gravity oil.

Clay County: L. T. Burns et al's Wynn 4, confirmation test and ¼ mile north of Burns-Wynn pool discovery, 6½ miles south Blue Grove, flowed 278 bbls oil 3 hours through partially opened gate valve, and on another gauge flowed 126 bbls 2 hours and 7 minutes. Well kicked off promptly after perforating 7-in at 6088-94 ft in Mississippian, topped 5873 ft, 24 ft high to discovery. Oil stain and odor in Ellenberger dolomite 6165-6265 ft not tested. In Antelope pool, Shell's Mullens 7-C, second Mississippian failure for area, recorded new oil zone in flowing 54 bbls initial after acidizing perforations 5451-80 ft in Bend, topped 5086 ft. Proved dry in Mississippian and Ellenberger, topped at 5956 ft and 6102 ft, respectively. Hunt Oil Co.'s Watson 1, 1¾ miles north of Antelope pool, proved dry in Strawn series, and drilling 5220 ft.

COMPLETIONS

Archer County: Hull-Silk—J. A. Chapman et al's Wilson 6, nw ne nw ATNCL 23, flowed 252 bbls 2-in, acidized 5000 gals 3768-3812 ft, td 4010 ft, pb to 3992 ft.

Archer County: Kolp—Waggoner & Young's Richardson 1, blk 20, J. Scott sur A-374, abnd 1222 ft. Rathke Oil Co.'s Roach 5, TE&L 1595, pumped 17 bbls, shot sand 1270-80 ft, td 1282 ft. C. H. Staley et al's Mangold 23, blk 30, P. Castleman sur, abnd 1800 ft.

Clay County: Antelope—Shell's Coburn 16, TE&L 2606, flowed 210 bbls 2-in natural, Strawn 3232-36 ft; Mullens 7-C, 330 ft from e and 1482 ft from n lines TE&L 2604, new producing zone, flowed 54 bbls 2-in, acidized 2000 gals 24 perfs 5451-80 ft in Basil Bend, topped 5086 ft, dry in Miss. 5956 ft and Ellenberger 6102-68 ft; Wright 3, nec TE&L 2625, flowed 261 bbls 2-in, shot 10 qts Strawn 3170-82 ft.

Clay County—Akin-Dimock-Costley's Saner 5-A, sec 5, Pratt subdiv, pumped 15 bbls natural 1116-23 ft. Fisher-Kahn's Taylor 4, W. Richardson sur A-1032, pumped 25 bbls natural 1120-40 ft. Geo. Golden-T. A. Norwood's Enyart 1-B, sec 7, Thornberry subdiv, abnd 1201 ft. Staley Oil Co.'s Hamilton 7, sec 83, Byers subdiv, pumped 55 bbls natural 1114-24 ft. Sussex Oil Corp.'s Shumake 27, sec 4, Bacon subdiv, pumped 25 bbls natural 1134-44 ft; Shumake 28, sec 3, abnd 1364 ft.

Cooke County: Walnut Bend—Magnolia's Ramsey 18, C. Furinash sur, pumped 302 bbls natural, Strawn 4695-4701 ft, td 4708 ft. Sinclair Prairie's Atkins 8, blk 59, Fannin CSL, pumped 162 bbls natural, Strawn perf 4773-98 ft, td 4836 ft.

Cooke County: Wilson—Burk Royalty Co.'s Wilson 1-B, W. Moore sur, pumped 35 bbls, shot 15 qts 2308-21 ft. Harvey Drl. Co.'s Wilson 2, W. W. Crisp sur, pumped 45 bbls natural 2304-12 ft.

Cooke County—Whitfield-Grimes et al's Fette 1, D. H. Campbell sur A-196, abnd 1765 ft.

Denton County: Wildcat—Hunt Oil Co.'s Jones 1, 4300 ft from s and 467 ft from e lines John Thomas sur A-1239, Bend 4085 ft, Ellenberger 5583 ft, td 5633 ft, pb and acidized perfs 5317-70 ft, abnd.

Haskell County: Wildcat—Ed C. Lawson et al's Rose-Amerada 1, 393-ac tr, J. M. Cass sur 57, new pool, pumped 257 bbls natural, perfs Canyon 2663-85 ft, td 3002 ft, pb to 2780 ft.

Jack County—Geo. E. Weber et al's Peterson 6, J. B. Irvine sur A-312, abnd 364 ft.

Montague County: Rogers & Rogers—Rogers et al's Astley-Texaco 7, J. Lenow sur, flowed 1104 bbls 1-in natural, Bend perfs 5265-79 ft, td 5345 ft.

Throckmorton County—R. F. Gilman et al's Tuton 2, A. J. Kemp sur, abnd 775 ft. Humble's McKnight 3, DL&C 2, abnd 4765 ft. T. C. Jones et al's Wilhelm 1, TE&L 651, abnd 757 ft. W. Neustadt et al's McKeichan 2-A, D. T. Yates sur A-1129, abnd 756 ft. Owenwood Pool No. 3's Housley 20, blk 28, Comanche Indian Reserve, abnd 1035 ft.

Wichita County—Perry Browning et al's Simpson 9, KWVFL blk 33, pumped 65 bbls sand 1764-72 ft; Simpson 2-B, KWVFL blk 33, pumped 50 bbls sand 1770-78 ft. A. A. Schwartz et al's Bailey 4, H. Hastie sur A-98, abnd 1341 ft.

Wichita County: K-M-A Ellenberger—E. C. Oil Co.'s Mangold 25-E, swc s½ blk 35 P. Castleman sur, flowed 1426 bbls natural 2-in, Ellenberger 4341-75 ft. Clint Murchison-Toddie Wynn's River Bed 2-E, flowed 2964 bbls, acidized 1500 gals Ellenberger 4137-4232 ft. Shell & Phillips' Griffin 41-E, 2140 ft from n and 3863 ft from w of Jordan sur, flowed 2256 bbls acidized Ellenberger 4356-80 ft. Tide Water Associated's Ferguson 14-E, 1170 ft from s and 1660 ft from e lines blk 1, W. H. Spillers sur, flowed 1712 bbls, acidized 3000 gals Ellenberger 4276-4362 ft.

Young County: Wildcat—Kerlyn-Phillips' Garvey 1, 2353 ft from e and 947 ft from n lines G&BN 4, A-119, ¾-mi sw Farmer, new pool, Bend 4275 ft, Marble Falls 4750 ft, Barnett 5180 ft, Ellenberger 5381-5441 ft, pb 4342 ft, perforated Bend 4281-4310 ft, reacidized 3000 gals, flowed 1182 bbls 45.7-gr ⅝-in.

Young County—L. T. Burns et al's Rogers 4, ne sw TE&L 219, abnd 919 ft. S. H. Fagadau et al's Allar Co. 1, TE&L sec 2410, subdiv D, abnd 3754 ft. N. Gray et al's Porter 1, W. Cantrell sur A-1393, abnd 662 ft. Pemeta Oil Co.'s Cole 6, TE&L 3403, pumped 5 bbls, shot 10 qts 689-702 ft.

OLD WELLS DEEPENED

Throckmorton County—Cross & Peterman's Harrell 2, B. M. Stroud sur A-1282, otd 611 ft, abnd 970 ft.

Young County—Thos. D. Humphrey's Jeffrey 4, TE&L 468, otd 3926 ft, abnd in Ellenberger 4940-75 ft.

WILDCAT STARTS

Clay County—H. S. Gray et al's Culver 1, 1300 ft from w and 150 from s lines blk 33, Specht-McCutchen sur, lcn.

Cooke County—Lou Stogner et al's Berry 1, SPRy A-1591, mim 6000-ft test. J. Z. Werby et al's W. A. Scroggins 1, 1250 ft from s and 700 ft from w lines S. P. Yearwood sur A-1534, ½ mi e Mountain Springs, lcn 3000-ft test.

Throckmorton County—Humble's S. H. Cain 1, 660 ft out nec s½ TE&L sec 1632, rur for 5000-ft test.

Wichita County—Fresno Oil Co.'s Frieda Nieman 1, 330 ft out sec Waggoner Colony blk 213, mim.

West Central Texas

Taylor County Test Has Oil in Saddle Creek

Taylor County encounters oil in Saddle Creek, and Palo Pinto test makes small pumper in Lake Kirby shallow pool. Deeper pays sought in Merkel pool. Jim Ned pool shallow strike has abundance of gas.

Taylor County: Carroll and Bill Snoddy et al's Tipton 1, T&P 20, blk 18, 3 miles northwest of Merkel, lowering pipe to test saturation in Saddle Creek 2696-2711 ft, elev 1846 ft, having filled 100 ft with oil. In Merkel pool, Staley Oil Co.'s Morgan 2, offsetting 2600-ft production, encountered additional water 2770-90 ft, and drilling 2810 ft. Lewis Production Co.'s Hart 1, northeast outpost, drilling lime 2775 ft, having cased off water. J. C. Hunter et al's Anderson 1, C NE SW LAL 8, inside test for Lake Kirby shallow pool, pumped 20 bbls oil and 6 bbls water initial after acidizing Palo Pinto 3358-85 ft, total depth 3393 ft.

Coleman County: Lewis Production Co.'s Greer 2, northeast outpost for Jim Ned pool, and first completion for Morris sand in upper Strawn, flowed 6 bbls oil hourly through ¾-in tubing choke on 31-hour gauge, gas volume rated 4,900,000 ft daily; production from sand 3476-85 ft, total depth 3500 ft.

Wildcats: In Comanche County, A. H. Woodfin et al's Pettit 1, Elizabeth Tatum Survey, 4 miles north of Marble Falls gas production in Pottsville area, Hamilton County, passed up show gas 2940 ft with increase 2960-80 ft. Butler & Horne Drilling Co.'s Murfee 1, Jones Boston Survey 276, western Jones County, logged show oil 2550-56 ft, drilling 2660 ft.

COMPLETIONS

Callahan County: Wildcats—Trumter Pet. Corp.'s Taylor 1, ne se se BOA 67, abnd 408 ft; Taylor 1-B, nec BOA 73, abnd 403 ft.

Comanche County—J. C. Hamer et al's Smith 2, BBB&C 31, pumped 40 bbls sand 742-52 ft. L. H. Choate et al's Boeicke 5, Lampasas CSL 2, No. 34, pumped 19 bbls, shot 20 qts, 612-32 ft.

Jones County: Wildcat—Hendrickson & Milner (was T. J. Coyne's) Clyburn 1, 1350 ft from w and 852 ft from n lines blk 24, Henry Millard sur A-243, elev 1627 ft, pumped 9 bbls oil, used 5000 gals acid 2362-72 ft, td 2378 ft.

Shackelford County—Roeser - Pendleton - Humble's Morris 6, ETRy 205, pumped 15 bbls, sand 1575-80 ft, td 1588 ft.

Stephens County: Wildcat—Orion A. Daniel et al's Black 1, swc TE&L 1283, elev 1160 ft, top Bend 3292 ft, 67 bbls oil and 3,250,000 gas, acidized 5000 gals, perf 3290-3301 ft, td 4252 ft.

Taylor County: Merkel—Fain-McGaha Oil Corp.'s Buford 2, nwc lse, Lot 5, Grimes CSL blk 124, flowed 1658 bbls natural, lower Hope 2581-2612 ft.

OLD WELL DEEPENED

Coleman County—Anzac Oil Corp. et al's Sealy-Smith 1, GH&H 13, blk 1, otd 2235 ft,

flowed 8½ bbls daily, pay 2298-2307 ft, td 2309 ft.

WILDCAT STARTS

Callahan County—J. D. Kynaston et al's Seale 2, 750 ft from s and 5300 ft from w lines J. D. Collins sur, sp.

Jones County—Carl S. Shoults et al's Alston 1, near c sw se H&TC 7, blk 1, lcn.

Shackelford County—Ed C. Lawson et al's Reeves 1, swc ne H&TC 14, blk 3, lcn.

East Texas

Strike in Arkansas Linked In Mexia-Talco Leasing

Major lease play under way across East Texas and immediately north and west of the Mexia-Talco Fault trend as sequel to recent completion of prolific oil well from Smackover lime in Midway area, Southeastern Arkansas. The latter discovery is north of the Arkansas portion of the Mexia-Talco Fault trend. The wildcat lease blocking in Texas is predicated on theory that similar geological conditions exist as those responsible for Barnsdall Oil Company's Midway strike. Buyers following comparatively narrow path to west from Texarkana across Bowie, Red River, Delta and Hopkins counties, thence southwest across Hunt, Kaufman and Ellis counties to tie into a similar play staged last summer in Navarro and Limestone counties. Majors are doing bulk of buying, paying $1 to $2 per acre for commercial leases. Hunt County is the site of most intensive buying with Humble Oil & Refining Co. and Magnolia Petroleum Co. setting the pace, as the fault trend follows a dog-leg course across this county, with current tracing further north and west than previous plays.

Wilson Completion: Ed A. Gillespie et al's Lundy 1, 1½ miles southeast of Lovelady, established second commercial oil area from shallow Wilcox sand for Southern Houston County, pumping 156 bbls 27.5-gravity oil initial after previously showing for producer on input gas. Production from perforations 3215-20 ft in Wilcox, topped at 2084 ft. Hole plugged back from 5016 ft.

Nacatoch Producer: O. W. Killam et al's Bass 1, southwest corner 140-acre lease, J. I. Sanchez Survey and 2½ miles north of New Salem, Southwestern Rusk County, confirmed earlier producing prospects in flowing 200 bbls fluid, including 85 percent 35.7-gravitiy oil and balance salt water, on 19-hour gauge 1-in choke. Productioin from perforations 2910-65 ft in Nacatoch topped at 2880 ft, elevation 414 ft. This is first shallow production for county.

Chapel Hill: Development of this multi-Trinity pay oil and gas-distillate field ranks second to Hawkins in volume for district. Currently has 7 active tests, 3 derricks and a new location by Sinclair Prairie on George H. Phillips tract. Magnolia Pipe Line Co. is second to authorized pipe line extension into field from its East Texas field system. Sinclair Refining Co. is at work on a carrier to East Texas field.

COMPLETIONS

Joiner Area—M. H. McMurrey et al's Blackwell 20, M. J. Pru sur, flowed 1440 bbls, Woodbine 3647-49 ft.

Longview Area—Shell's Williams 4, McAnally sur, flowed 1500 bbls, Woodbine 3488-3548 ft, td 3578 ft. Tide Water's Skipper 2, sec 10-ac, I. C. Skillern sur, flowed 1080 bbls, Woodbine 3557-76 ft.

Anderson County: Long Lake—Hunt Oil Co.'s Johnson 1, nwc 25.1-ac lse, S. Sanchez sur 1-11, flowed 70 bbls natural 7/64-in, Woodbine 5287-92½ ft, td 5301 ft. Long Lake Prod. Co.'s Chastain 1, nec 10-ac tr, John Adams sur, flowed 116 bbls natural ⅛-in, Woodbine 5340-53 ft. Tex Harvey Oil Co.'s Neel 2, nec 94.62-ac tr, E. Ewing sur, flowed 50 bbls 6/64-in, Woodbine perf 5399-5400 ft, td 5405 ft.

Navarro County: Wildcat—John R. Bunn et al's Cocke 1, 7100 ft from nw and 1200 ft from ne lines John White sur, Austin chalk 2190-2635 ft, Woodbine series 2976 ft, sand 3050 ft, abnd 3140 ft.

Houston County: Wildcat—Ed A. Gillespie-C. P. Culmore's Lundy 1, 467 ft out sec of ne 40 acres of 310-ac tr, John Forbes sur, 1½ mi se Lovelady, new pool, top Wilcox 2084 ft, pumped 156 bbls 27.5-gr pipe line oil, perf 20 shots 3215-20 ft in 5½-in at 3295 ft, pb from td 5016 ft.

Sabine County: Wildcat—K. E. Merren, Stark & Brown 1, Koester sur, abnd 4532 ft.

Wood County: Hawkins—Humble's Atkins 5, 2333 ft from n and 467 ft from e 341.44-ac lse, J. P. Moseley sur, flowed 433 bbls ¼-in, perf 4557-63 ft, td 4867 ft; L. A. Bryan 4-B, nec 202.98-ac tr, M. A. Esparcia sur, flowed 26 bbls 17.9-gr oil daily, perf 4755-4873 ft, td 4947 ft; Faulk 3, sec 163.38-ac lse, Jas. Pollock sur, flowed 366 bbls ¼-in, perf 4765-89 ft, td 4854 ft; Tom Jackson 1-B, sec 58-ac lse, Ed Wideman sur, flowed 386 bbls ¼-in, perf 4726-36 ft, td 4955 ft; Tom Jackson 1-C, nwc 70-ac lse, Ed Wideman sur, flowed 340 bbls ¼-in, perf 4771-78 and 4819-26 ft, td 4865 ft; E. M. Slaughter 3-A, 41.97-ac lse, Geo. Brewer sur, flowed 309 bbls ¼-in, perf 4697-4702 and 4765-71 ft, td 4820 ft; J. C. Snow 1, swc 211.55-ac lse, J. B. Crain sur, pumped 124 bbls 18.7-gr oil, perf 4845-54 ft, td 5023 ft. Navarro Oil Co.'s Green 3, J. P. Moseley sur, pumped 95 bbls 21.6-gr oil, perf 4816-85 ft, td 4888 ft. Sol Simon et al's Downing 1, near c 2.23-ac lse, Geo. Brewer sur, flowed 418 bbls, perf 4600-4800 ft, td 4828 ft. Stanolind's Miller 6, on 118¼-ac lse, J. P. Moseley sur, flowed 280 bbls ¼-in, perf 4721-31 ft, td 4768 ft.

SALT WATER DISPOSAL

Longview Area—Texas Co.'s Deering 9, J. M. Pineda sur, otd 3682 ft, td 3842 ft, rated 500 bbls salt water daily by gravity.

WILDCAT STARTS

Falls County—Preston Managhan et al's R. H. Perkins 1, 500 varas from w and 2500 varas from s lines Perda Zarza sur, 1 mi nw Moorsville, sd 265 ft.

Hopkins County—Donnie Pet. Co.'s S. A. Welborn 1, swc 56.2-ac tr, Jas. Webb sur, 1½ mi se Como, mim.

Southwest Texas

Boyle Sets Flow Pipe In Lavaca County Wildcat

W. Stewart Boyle et al's Roecher 1, 12 miles southeast Hallettsville, Lavaca County, originally scheduled for abandonment 9065 feet in Wilcox, is running casing for completion attempt. Would open fourth Wilcox field for county. Shell Oil's Neuhaus 1, 3 miles south of Vienna field, Lavaca County, is shut in for pipeline connections after filling storage with dark crude production apparently from near bottom 10,169 feet in Wilcox discovery of new field. Shell is reported preparing to commence a pipe line to give four Wilcox oil areas in Colorado and Lavaca counties their first outlet. The line would run from the Sheridan field to Shell's new production south of Vienna. The Vienna field and the Brushy Creek field crude likely would be handled through the Sheridan-Rock Island line to railroad loading rack pending a truck line connection.

O. W. Killam, who in 1921 completed the Mirando district's first commercial oil well and led the way to the development of a large portion of this region's oil reserves, has struck again 10 miles north of the site of the first successful completion.

Webb County: O. W. Killam's Marrs McLean 1, sw cor sec 610, 6 mi se Mirando City, Webb County, flowed 167 bbls 44.5-gr oil, ¼-in ch, 70 lbs casing pressure, from perf 3243-49 ft, sand 3238-53 ft, td 4016 ft. Sand in lower Yegua 100 ft below 3500-ft zone at Bruni. Well is still testing.

Jim Hogg County: Sun Oil Co.'s East 1-B, ne outpost Colorado field, flowing est 150 bbls oil from sand at 2902-11 ft.

Bee County: Tom Slick's Grissom 1, 1 mi s Caesar field, flowed gas, 35 bbls light dist, 6/64-in ch, 2100 lbs tubing, 2400 lbs casing pressure, perf 6552-57 ft in bottom Carrizo sand. Still testing. Opens new field in Carrizo.

Lavaca County: W. S. Boyle's Roecher 1, 3 mi sw Vienna, abnd at 9056 ft in Wilcox.

Webb County: Transwestern & Continental's Houston 1, Carolina-Texas field, has shut down for orders at 9224 ft in Wilcox.

Jackson County: W. S. Boyle et al's Rodnesney 1, J. Rambo sur, 2½ mi e Ganado, Jackson County, flowed 116 bbls 27.6-gr oil ⅛-in ch, 550 lbs tubing and 1100 lbs casing pressure, perf 5408-14 ft in Frio, opening field.

COMPLETIONS

Bee County: Wildcat—Henderson Coquat's Bourroum 1, J. E. Taylor sur, 12 mi e Oakville, abnd 4205 ft.

Brooks County: LaGloria—La Gloria's S. Unit 2, lot 2, blk 12, dual sand comp, gas dist well for recycling plant, top perfs 5930-45 and 5888-5908 ft, 2100 lbs wp; lower perfs 6780-95 ft, 2350 lbs wp, td 6950 ft.

Hidalgo County: McAllen—W. R. Davis' Jackson-Harrison 1, lot 3, blk 10, 9400 ft ne prodr, flowed 17,000 gas 18 bbls 56-gr white dist open flow, 3000 lbs shut in, perf 7058-70 and 7042-87 ft, 1450 lbs wp, ⅜-in ch, td 7682 ft.

Hidalgo County: Nichols—Baldridge & King & C. R. Nichols' Yturria 2-A, lot 9, flowed 72 bbls, 3/32-in ch, 475 lbs tp, 875 lbs cp, perf 3914-15, td 3948 ft.

Jackson County: Lolita—Humble's L. Ranch 9-B, blk 143, flowed 143 bbls 42.8-gr oil, ⅛-in ch, 950 lbs tp, 2100 lbs cp, gas/oil ratio 515/1, 5⅛-in csg 6379 ft, sand 6389 ft, td 6392 ft.

Jackson County: N. LaWard — Humble's Four-Way Ranch 1, blk 75, flowed 141 bbls 29-gr oil, ⅛-in ch, 650 lbs tp, 650 lbs cp, gas/oil ratio 525/1, 5½-in cas 5200 ft, top sand 5209 ft, td 5215 ft.

Jackson County: West Ranch—Magnolia's West 201-A, R. Musquez gr, flowed 93.6 bbls 30.3-gr oil, ⅛-in ch, 400 lbs tp, 615 lbs cp, gas/oil ratio 313/1, perf 5592-5602 ft, top pay 5592 ft, td 5605 ft. Magnolia's West 219-A, R. Musquez gr, flowed 126.96 bbls 31.6-gr oil 7/64-in ch, 830 lbs tp, 1000 lbs cp gas/oil ratio 395/1, perf 5746-50 ft, td 5760 ft. Abe Seibel's Bennview 1, V. Garcia gr, flowed 108 bbls 31-gr oil, 660 lbs tp, 785 lbs cp, gas/oil ratio 397/1, perf 5760-65 ft, tp pay 5760 ft, td 5814 ft.

Jim Wells County: Ben Holt—Earl Callaway's Smith 1-C, LaTrinidad gr, salt water sand 5492-5512 ft, abnd 5512 ft. Mosser & Graham's Roberts 1, sur 53, abnd 5510 ft.

Jim Wells County: Henshaw—Rand Morgans' Fee 1-H, sec 1, San Antonio de Agua Dulce gr, blk 2, flowed 20.73 bbls 33-gr oil, 20% sw, 11/64-in ch, 375 lbs tp, 575 lbs cp, gas/oil ratio 1700/1, oil sand 3778-90 ft, 5½-in 5121 ft, perf in 3700-ft sand, oil 59-octane, td 5850 ft; new sand, extends field 1 mi s.

Jim Wells County: Orange Grove—Kilgore Developers' Schmidt 1, Casa Blanca gr, 3 mi ne Orange, abnd 5636 ft.

Jim Wells County: Seeligson—Magnolia's Seeligson 26, A. Ramirez gr, flowed 140.42 bbls 42.8-gr oil 22 hrs, 7/64-in ch, 1200 lbs tp, 1200 lbs cp, gas/oil ratio 507/1, perf 6101-04 ft, td 6226 ft.

Kleberg County: Kingsville—G. C. Dietert's Henry 3-A, lot 2, sec 49, flowed 50 bbls 21-gr oil 3/16-in ch, 75 lbs tp, 175 lbs cp, top pay 2466 ft, 5½-in 2557 ft, td 2471 ft.

Kleberg County: Stratton—Humble's King Ranch-Paso Ancho 7, Paso Ancho de Abajo gr, flowed 116 bols 43.3-gr oil, ⅛-in ch, 850 lbs, tp 1100 lbs cp, gas/oil ratio 748/1, perf 6438-54 ft, tp sand 6432 ft, td 6643 ft.

Live Oak County: Wildcat—Charles N. Burns' Gurwitz 1, blk 14, S. Carey sur, 3 mi s Three Rivers, Cole 1440 ft, Pettus 2660 ft, salt water in Pettus, abnd 2697 ft.

Nueces County: East Flour Bluff—Humble's Flour Bluff-State 1-O, tr 20, flowed 113 bbls, ⅛-in ch, 350 lbs tp, cas sealed, td 6795 ft.

Nueces County: North Luby — Sinclair Prairie's Knight 1, lot 4, n outpost, Petronila sector, abnd 7520 ft.

Nueces County: Stratton—Chicago Corp.'s Wardner 24, sec 3, dual sand dist well, connected to recycling plant, 2450 lbs wp from perfs 6420-35 ft and 2600 lbs wp from perfs 6505-20 ft, 6524-37 ft, 6547-65 ft and 6622-45 ft, td 6780 ft; Wardner 32, sec 8, gas-dist

well, perf 6589-6608 ft, 6614-45 ft and 6673-95 ft, td 6820 ft.

Refugio County: McFaddin—P. R. Rutherford and Gulfshore Oil Co.'s Fagan 4-B, J. Dunn sur, flowed 81.5 bbls 30.8-gr oil, 3/32-in ch, 700 lbs tp, 975 lbs cp, gas/oil ratio 705/1, perf 5616-22 ft, top sand 5603 ft, td 5800 ft; Fagan 5-B, J. Dunn sur, flowed 82 bbls 30.8-gr oil, 3/32-in ch, 720 lbs tp, 1350 lbs, cp gas/oil ratio 750/1, perf 5615-19 ft, top sand 5605 ft, td 5767 ft.

Refugio County: Refugio—Hewit & Dougherty's Vance 1, blk 7, flowed 132 bbls 38-gr oil, 5/32-in ch, 550 lbs tp, 1240 lbs cp, gas/oil ratio 773/1, perf 6231-38, top sand 6231 ft.

San Patricio County: Odem — Seaboard's Smith 5, J. Hart & Sons gr, flowed 103 bbls 42-gr oil, ⅛-in ch, 600 lbs tp, 750 lbs cp, gas/oil ratio 529/1, perf 5425-28 ft, top sand 5424 ft, td 5434 ft.

San Patricio County: Plymouth—Plymouth Oil Co.'s Welder 122-C, sec 45, flowed 129.75 bbls 42.6-gr oil, 7/64-in ch, 1300 lbs tp, 2300 lbs cp, gas/oil ratio 956/1, perf 5145-48 ft, top sand 6137 ft, td 6148 ft.

Victoria County: Coletto Creek — North Millican-Duke Matthews' Kastner et al 5, R. Manchola gr, flowed est 12,000 gas, 800 lbs rp, perf 2193-96 ft, td 4785 ft. Albert Plummer's Terrell 4-C, R. Manchola gr, flowed 20,000 gas, 1200 lbs rp, perf 4665-69 ft, top sand 4670 ft, td 4685 ft.

Bexar County: Gas Ridge—Ripps Pipe & Supply Co.'s Sweeney 2, F. Recardo sur, abnd 655 ft. Southwest Dr. Co.'s Covell 31, L. Munoz gr, pumped 1.7 bbls 36-gr oil, top sand 424 ft, td 473 ft; Covell 42, pumped 2.4 bbls 36-gr oil, top sand 410 ft, td 460 ft.

Dimmitt County: Carrizo—Walton & Galt's McKnight 1, blk 72, sur 653, abnd 2318 ft.

Guadalupe County: Wildcat—J. A. Forrester's Maierhofer 1, Peters sur No. 80, 4 mi e New Berlin, top Edwards 2300 ft, abnd 2320 ft.

Duval County: Sejita—Trinity Gas Corp.'s Barrera 1, tr 16, sh 1, 4500 ft e prod, flowed 375 gas, 20 bbls 55-gr dist, perf 5585-5605 ft, top sand 5585 ft, td 6085 ft.

Duval County: Wildcat — Tom Graham's Villareal 1, San Andres gr, 7 mi s Benavides, abnd 6206 ft. Hundred & One Oil Co.'s Martinez 1, blk 10, Bateman sub, sh 2, Falcon gr, 3 mi se Santa Cruz, abnd 2705 ft. A. L. Slaughter's Dee, McFall & Hunter 1, sec 515, 2 mi nw Kreis field, abnd 3351 ft.

Jim Hogg County: Colorado — Humble's King-Colorado 50-B, LaMoretas gr, flowed 186.30 bbls 46.3-gr oil 3/16-in ch, 390 lbs tp, no cas pressure, top sand 2830 ft, td 2841 ft.

Starr County: Rincon—Continental's M. M. Garcia 1-D, sec 907, outpost, flowed 233 bbls 41.7-gr oil 3/16-in ch, 540 lbs tp, 800 lbs cp, perf 3912-28 ft, td 4105 ft; Slick 66-A, sec 231, flowed 238 bbls 44.8-gr oil 3/16-in ch, 525 lbs tp, 790 lbs cp, gas/oil ratio 484/1, perf 4102-20 ft and 4132-48 ft, td 4185 ft; Slick 61, sec 506, flowed 229 bbls 39.8-gr oil 3/16-in ch, 550 lbs tp, 640 lbs cp, gas/oil ratio 338/1, perf 3983-98 ft, td 4240 ft.

Webb County: Killam—Anderson & Killam's Laurel 2, sec 333, flowed est 15,000 gas, 10 bbls 21-gr oil ¼-in ch, 400 lbs cp, perf 1995-2005 ft, td 2005 ft. O. W. Killam's Garcia-Villareal 21, sur 1099, flowed est 1800 gas, 16 bbls 21-gr oil ¼-in ch, 350 lbs tp, 400 lbs cp, perf 1996-2004 ft, td 2070 ft.

WILCAT STARTS

Duval County—Bridwell Oil Co.'s Parr 1-B, sec 64, J. Poitevent sur 276, 9 mi w San Diego, lcn 4500-ft test.

Jackson County—Gulf's Simons 1, F. Wells lg, 8000 ft sw Sinclair's Volkmer 1 marg disc at Texana, lcn 7000-ft test. S. W. Richardson's Fenner 1, Texana, R. Musquez gr, 2¼ mi n Lolita townsite, lcn 6500-ft test.

Maverick County—Texon Royalty Co.'s Sullivan 1, I&GN 14, blk 11, 28 mi w Carrizo Springs, lcn 575-ft test.

Refugio County — Hewit & Dougherty's Rooke 5-A, blk 2, subd C, Aldrete gr, 2 mi w La Rosa, dk 7000-ft test.

Webb County—O. W. Killam's Garcia et al's 1, sec 608, 12 mi s Mirando City, lcn 2500-ft test.

Wilson County—H. A. Suttle's Hardy 1, J. Reynolds sur, 6 mi se Floresville, lcn 5300-ft test.

Texas Gulf Coast

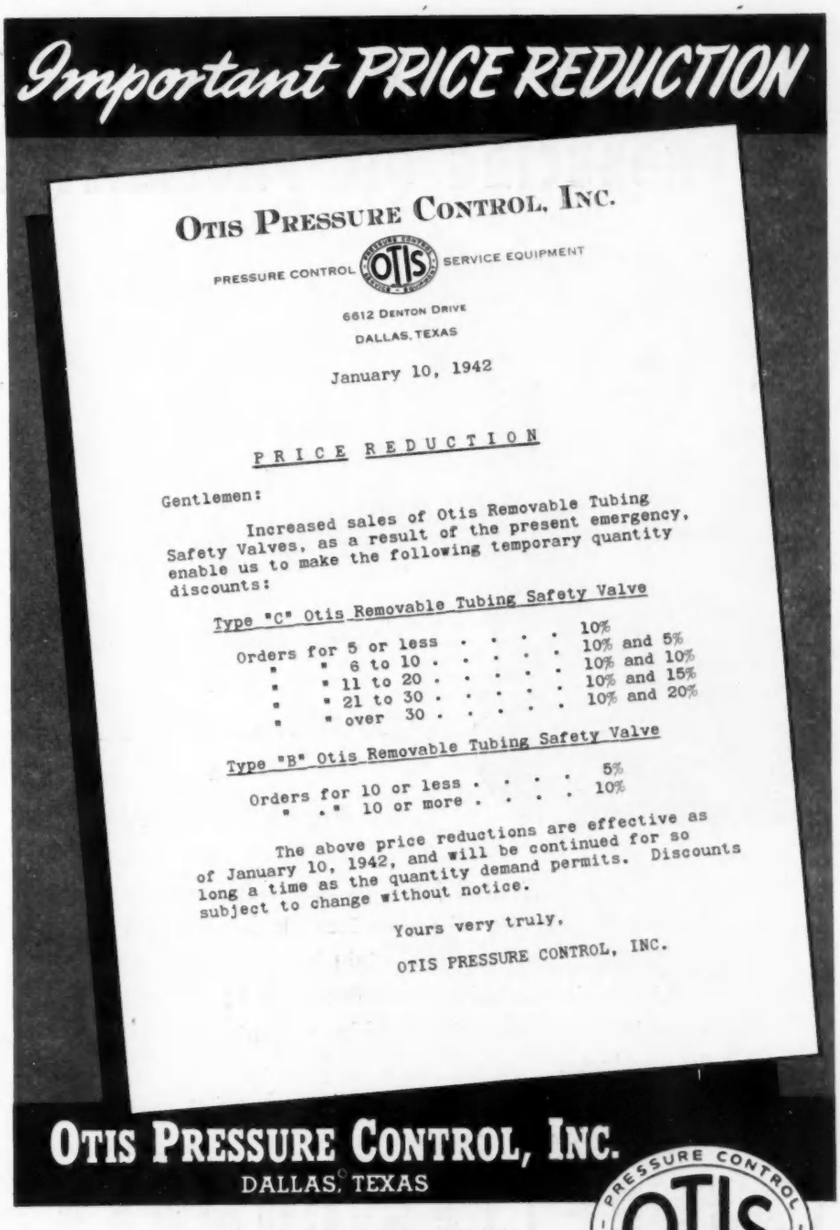
Chambers Wildcat Testing; Wilcox Interest Increases

Chambers County wildcat making more production tests. Wildcat near new discoveries in Tyler County coring in Cockfield.

Chambers County: Rowan Drilling Co. is making more production tests on Land 1, South Anahuac prospect, in attempt to open oil instead of gas production. Latest test was made at 8784-87 ft in Frio after running new packer. Well was perforated and squeezed at 8788-90 ft and 8780-82 ft to cement off gas and water flow from above and below sand to be tested. A test was made at 9040-42 ft, showing gas and distillate with 3100 pounds tubing pressure. Prospect also is known as Ash Point and Double Bayou.

Tyler County: American Republics-Houston Oil Co. 1 Fee, 1¾ mi southeast of Camp Eleven discovery, found oil and gas odors in Cockfield while coring. Operators will drill well to Wilcox to test sands producing at Fred and Camp Eleven. The Camp Eleven discovery, Cushing-Fee 1, is running potential test after being shut in several days waiting on tanks. It flowed estimated 70 barrels in 10 hours through ⅛-in choke from perforations at 8000-10 ft, casing pressure 1800, tubing 1425. Operators have staked 3 locations, Cushing 2 will be northwest of discovery, Cushing 3 north of discovery, Cushing 4 southwest of Cushing 1, all on 40-acre units.

Wilcox Trend: With two new discoveries in Tyler County considerable acreage is being leased in San Jacinto, Montgomery and other Wilcox trend areas. A spurt in wildcatting in these areas may be expected. Shell's Central Coal and Coke 1, Mercy area, San Jacinto County is standing cemented around 8305 ft. Well is credited with opening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Wilcox field, and testing has been delayed, possibly by title work.

Superior Oil Co. is extending production easterly at Lake Creek, Montgomery County, with South Texas Development 1 preparing for testing. Hole is bottomed at 10,300 ft, electrical log run to bottom. Reports credit formations higher in this outpost than regular field producers. Operators' McWhorter 1-C in the southwest part of field also is testing, total depth 10,325 ft.

Wildcats: Clark & Cowden Drilling Corp. has located Kountze 1, Danevang area, Wharton County, 1½ miles northeast of townsite on 40-acre tract in ETRR 85. It is on same prospect as Sinclair Prairie's Carlson 1, 8015-ft hole abandoned July, 1941.

Stanolind's Murchison 1, 1¾ miles south of Chenango field, Brazoria County, is credited with finding oil sands in deeper horizons, but information has not been released. Shows were reported around 8179 ft. Chenango field itself has been disappointing, sands being thin.

COMPLETIONS

Brazoria County: Manvel — Texas Co.'s Helene 1-C, J. Way sur, 330 ft s of most n'ly n l & 330 ft ne of sw l, HTB 33, abnd 4847 ft.

Harris County: Wildcat—Texas Co.'s Harris County Land & Implement Co. 1, 8 mi e Humble, 466 ft fr n l & 466 ft fr e l of block 19, Victor Blanco sur, abnd 4510 ft.

Harris County: Dyersdale—Jack Frazier's D. H. Smith 1, 330 ft fr s & e lines of 20-ac unit, Whitney Britton sur, sand 4064-80 ft, flowed 146 bbls ¼-in ch, td 4080 ft.

Harris County: Goose Creek—Grace Oil Co.'s Wright C-24, 50 ft fr ne l & 60 ft fr se l of blk 8, William Scott lge, pumped 13 bbls 20.2-gr oil daily, td 1755 ft.

Liberty County: Esperson—General Crude's T. E. Davis Est. 29, 2650 ft n of s l & 2073 ft w of e l of 805-ac tract, D. L. Kokernut sur, tested gas, no gauge, tp 3000, cp 3300, td 8859 ft; Esperson Fee A-46, 466 ft fr w l & 467 ft fr n l, GCSF 24, perf 8200-30 ft, flowed 54 bbls 5/32-in ch, tp 2700, cp 3000, td 8693 ft.

Montgomery County: Conroe—John Blaffer's John I. Butler 1-A, 460 ft out of se cor 65-ac tr, Robert Kuykendall sur, flowed 39 bbls ¼-in ch, 25% sw, tp 350, cp 800, td 5200 ft.

Wharton County: Withers—Texas Co.'s Pierce Est. B-30, 330 ft fr s l of A. P. Borden sur 521, perf 5536-40 ft, flowed 74 bbls ¼-in ch, tp 300, cp 435, td 5558 ft.

NEW STARTS

Brazoria County—H. E. Williams' C. L. Morrey 1, Lochridge area, 466 ft fr s & w of ne cor 40-ac lse out of 400-ac tr, Andrew A. Robinson sur 12, 2516 ft w of Oyster Bayou along n l of tract, pd 7000 ft, Prospect Drilling Company, contractor, lcn.

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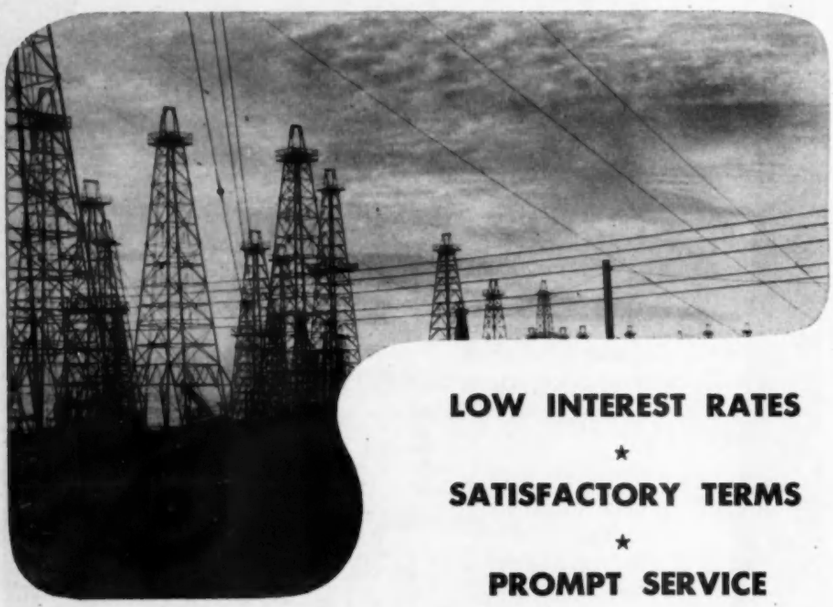

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HOUSTON, TEXAS

Louisiana Gulf Coast

Jefferson Davis Well Opens New Gas Reserve

Jefferson Davis well makes tests, indicating new gas and distillate field. Flank production opened at Starks, Calcasieu Parish.

Jefferson Davis Parish: Cities Service continues to test Lacassine Land Co. 1, Thornwell prospect, through perforations at 10,319-021 ft in Oligocene. Well showed 6500 pounds shut-in pressure and 5700 pounds flowing pressure on ⅛-in choke. The well has been watched closely since it drilled into high pressure gas sands. Total depth is 10,325 ft.

Calcasieu Parish: W. T. Burton has opened new flank production around Starks dome. Operator's Lutcher-Moore 4, 19-9s-12w, was perforated at 5990-6020 ft in Miocene, and flowed 525 barrels through ¼-in choke with 925 pounds pressure on tubing. Perforations were made in 30 ft of sand.

Beauregard Parish: Atlantic Refining Co. is making more tests on Hawkins 1, Neale Wilcox field. The well is bottomed at 12,584 ft, deepest in area, and four production tests have been made, all yielding salt water and gas. There is little doubt of completing the well as a producer in regular horizons higher in the hole, but chances of tapping deeper reserves in the Wilcox are considered remote with failure of the well in the 12,000-ft levels. Last test was 11,574-592 ft.

Terrebonne Parish: Development of Lapyrouse prospect received a setback with Gulf abandoning Eschete 1, 67-20s-18e, north of discovery gas well. Well was drilled to 12,001 ft in deeper sands, but electrical log failed to show any sections worthy of test. Sidewall samples also confirmed the dry sand bodies.

Acadia Parish: The Easterwood prospect will be tested again with Continental and Sun staking Homeseekers Development 1, 1 mile southwest of Magnolia's dry hole. Area has been worked thoroughly with different instruments by numerous companies.

COMPLETIONS

Acadia Parish: Jennings—Shell's Conover-Community 19, 1265 ft sw fr nwc 40 and 1720 ft se at ra in 40-9s-2w, perf 7437-42 ft, showed salt water, squeezed, reperf 7475-80 ft, flowed 165 bbls 11/64-in chk, tp 420, gor 800-1, gr 38.9, td 7679 ft.

Acadia Parish: Ritchie—Vincent & Welsh & Nicklos' Hayes 4, 330 ft s and e nw c sw nw 21-7s-1w, top sand 3496 ft, set pipe 3472 ft, flowed 25 bbls day, sanded up, recompleted 45 bbls 9/64-in chk, tp 140, cp 225, gr 25, td 3507 ft.

Evangeline Parish: Ville Platte—Continental's Fontenot-St. Landry 3, start w cor P. Fontenot east 177-ac tract, go 36n-10e alg

nw l 2882 ft, thence 50s-50e 617 ft to lcn in 44-3s-2e, perf 10,222-236 ft, flowed 288 bbls 12/64-in chk, tp 1250, cp 1900, gor 1625-1, gr 36, td 10 271; Tate 2, start w cor A. Tate 33.5 ac tract 3, go 40s-36e alg sw l 2802 ft, thence 49n-29e 365 ft to lcn in 43-4s-2e, perf 10,154-168 ft, flowed 232 bbls 12/64-in chk, tp 1600, cp 1000, gor 1450-1, gr 40.3, td 10,190; Vidrine 5, start sw cor 34-3s-2e, go along s l 330 ft, thence north at ra 500 ft in 34-3s-2e, abnd 10,197 ft.

Iberville Parish: Bayou Blue—Superior's Schwing 20, 2065 ft n and 3257 ft w se c 74-9s-10e, logged 236-ft sand, top salt 4010 ft, perf 3778-83 ft, flowed 125 bbls ⅛-in chk, tp 490, cp 360, gr 28.7, td 4017 ft.

Iberville Parish: Whitecastle—Shell's Wilberts 22, 89n-30w 1970 ft along s l sec 8 fr se cor, thence n 790 ft at ra in 8-11s-12e, top salt 6212 ft, pb, td 5925 ft, perf 5888-5908 ft, flowed 162 bbls 10/64-in chk, tp 440, cp 850, gor 336-1, gr 25.5, td 6276 ft in salt.

Jefferson Parish: Delta Farms—Texas Co.'s State-Bayou Perot 3-356, 157 ft s and 4833 ft e of nwc sec 6 in bayou T-17s-23e, abnd 12,015 ft.

Jeff Davis Parish: Iowa—Shell's Fontenot 9, 1000 ft n and 330 ft e sw c 7-9s-6w, ran log 6935 ft, 7997 ft, perf 8197-8212 ft, flowed 299 bbls 9/64-in chk, tp 1375, cp 1150, gr 37.2, gor 710-1, td 8250 ft.

LaFourche Parish: Chacahoula—Sun's Dibert-Stark-Brown 12, 780 ft w and 25 ft n se c 71-15s-15e, perf 7248-72 ft, flowed 17 bbls 2 hrs 9/64-in chk, tp 1050, csg sld, gor 556-1, gr 33.6, td 7425 ft.

Plaquemines Parish: Garden Island—Texas Co.'s State 55-214, s 75 e 1200 ft fr No. 47, in 29-23s-23e, perf 5515-58 ft, flowed 81 bbls 5/32-in chk, gr 31.2, gor 644/1, td 8188, heaving shale.

Plaquemines Parish: Venice—Tide Water's Buras Levee District 13, 2093 ft fr n and 898 ft fr e l 22-21s-30e, perf 9300-24 ft and 9264-80 ft, flowed 341 bbls 5/32-in chk, tp 1725, gor 950/1, gr 32.8, td 10,193 ft.

St. Mary Parish: Horseshoe Bayou—Texas Co.'s St. Mary Land Co. 5, 3512 ft w and 894 ft n ne c 23, being in 37-17s-9e, sand 10,890-900 ft, flowed 296 bbls 10/64-in chk, tp 1700, gr 38.2, gor 1800-1, td 10,906 ft.

WILDCAT STARTS

Acadia Parish—Continental & Sun's Homeseekers Development 1, Easterwood prospect, go n alg e l 1995 ft, thence w at ra 654 ft in 16-10s-1w.

Calcasieu Parish—Union of California's Matilda Grey Est 1, Vinton flank, 1800 ft w and 1100 ft n sec 32-10s-12w, Dixie Drilling Co., contractor.

North Louisiana

Deep Test at Lisbon Has Gas Blowout

North Louisiana's deepest test has gas blowout in Smackover lime and runs electric log. New wildcats planned in Olla trend.

North Lisbon: Union Producing Co.'s McDonald 1, C SE 13-21n-5w, Claiborne Parish, North Louisiana's deepest test, blew out while drilling last week at 11,880 ft, after setting new depth record. Blow-out preventers kept test under control and gas flow killed while electrical log run preparatory to production test in Smackover lime.

Wildcats: H. L. Hunt staked a wildcat in Winn Parish, Goodpine F-17, C SW NE 19-10n-4w, six miles south recently abandoned Goodpine F-13. New location two miles north of Coochie Brake salt dome. Hunt also secured 30,000 acres in townships 4 and 5 north, range 5 east, LaSalle and Catahoula parishes from Louisiana Delta Hardwood Lumber Company for series of tests. Hunt bought Big West Drilling Company's discovery gas well and its other holdings in Trout field.

COMPLETIONS

Bienville Parish: Wildcat—R. E. Collins' Madden 1, sw se 3-16n-8w, abnd 2017 ft (chalk).

Bossier Parish: Bellevue—W. G. Coates' Bellevue Land Co. 1, sw 27-20n-11w, abnd 2924 ft; C. H. French's Scanland 6, 386 ft w and 428 ft n se ne 15-19n-11w, pumping 5 bbls oil daily, td 406 ft (Nacatoch).

Catahoula Parish: Wildcat—Placid Oil Co.'s Grant 2, c sw ne 29-6n-6e, elev 54 ft, abnd 6570 ft.

LaSalle Parish: Hemphill—Berkshire Oil Co.'s Ward A-1, nwc lot 1, 40-7n-3e, elev 56 ft, flowed 288 bbls oil daily 2% sw 12/64 ch tp 900, cp 1375, td 4008 ft. Patrick et al's Coon-Cannon 1, irreg sec 41-7n-3e, flowing 77 bbls day 5% sw, 1.8 in ch, tp 375 on pckr, td 4062 ft.

LaSalle Parish: Nebo—H. L. Hunt's Goodpine A-40, c sw se 16-7n-3e, flow 175 bbls 24 hrs 2% sw 14/64 ch, tp 320, cp 640, td 4105 ft. Patrick & Terrell's Goodpine 2, ne ne 21-7n-3e, flow 129 bbls oil daily, td 4166 ft, ⅛ in ch, tp 625, cp 600. Sinclair Prairie's Stapleton 1, nwc lot 9, 10-7n-3e, abnd 4122 ft.

LaSalle Parish: Wildcat—Placid Oil Co.'s Urania A-1, c se sw 17-8n-2e, abnd 4472 ft; Goodpine F-15, c sw se 15-8n-4e, abnd 5404 ft.

LaSalle Parish: Trout—Placid's Parker 1, c nw nw 28-8n-3e, abnd 3855 ft. H. L. Hunt's Goodpine F-22, c se sw 25-8n-2e, abnd 3792 ft.

LaSalle Parish: Little Creek—H. L. Hunt's Tannehill & Gallagher 9, c nw nw 31-9n-2e, perf 2475-80 ft, 24 shots flow 115 bbls 24 hrs with 20% input gas, td 2688 ft.

Union Parish: Wildcat—Carter Oil Co.'s Walden 1, 1282 ft e and 1379 ft n swc 19-21n-2w, abnd 5643 ft.

Winn Parish: Wildcat—H. L. Hunt's Goodpine F-12, c nw nw 21-10n-1w, abnd 3885 ft.

Arkansas

McKamie Well Has Oil From Cotton Valley

First commercial production in Cotton Valley horizon at McKamie; Midway discovery well given production tests; new well looms at Macedonia.

McKamie: First commercial production from the Cotton Valley (Lower Marine) horizon was obtained last week in the McKamie field, LaFayette County, when Carter Oil Co. plugged back Cornelius 1, C NE 30-17-23, from the 9300 ft Smackover lime gas-distillate producing level and perforated at 7255-65 ft with 28 shots. The well is flowing 35-gravity oil by heads at 15 to 20 barrels per hour, with 10 to 20 percent wash water. Shut in overnight pressures

GAS-LIFT PRINCIPLES AND PRACTICES

By S. F. SHAW, E.M.
Consulting Engineer

THIS BOOK is largely based on a series of lectures on gas lift delivered before the Petroleum Engineering Department of the Agricultural and Mechanical College of Texas on November 9th and 10th, 1939, by the author as special lecturer of the Department of Petroleum Engineering.

A history of the development of the air-gas lift is given, covering operations in air and gas-lift, and noting some of the inventions that have been patented in connection with this work.

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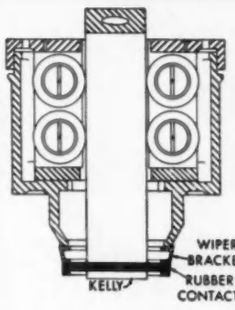

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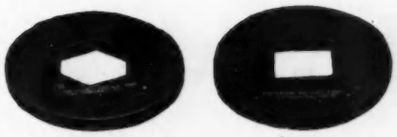

PATTERSON-BALLAGH CORPORATION
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were: casing, 950 pounds; tubing, 300 pounds.

Midway: With starting of new tests in the new Midway field, LaFayette County, held in abeyance until January 22 when the Arkansas Oil and Gas Commission will pass on applications for 12 new tests there, Barnsdall Oil Co. last week was taking bottom-hole pressure and flow tests at Bond 1, NW SW 11-15-24, completed at 6537 ft flowing 83 barrels hourly of 39.5-gravity oil through ¼-inch choke.

Macedonia: Another producer loomed in Macedonia, Columbia County, in McAlester Fuel Co.'s Snider Unit 1, C S½ NE 21-18s-21w, which topped porosity in Smackover lime at 8837 ft (elevation 268) and drilled to 8910 ft.

East Schuler: Atlantic Refining Co. was swabbing Mason 1, C SE SW 13-18-17, East Schuler field, Union County at the 5800-ft producing level. Top of Cotton Valley at 5372 ft, elevation 234 ft. Test is south offset same company's J. H. Calloway 1, C SE NW 13-18-17, dry at 6001 ft after numerous tests at 5802-06 ft had salt water with only slight shows oil and gas.

Alabama

COMPLETION

Madison County—E. O. Heath, Jr., Tr.'s Cambron 1, sw se se 35-5s-2e, elev 694 ft, abnd 278 ft.

Mississippi

Madison County Well Flow Includes Salt Water

It appears that tank car shipments from the Tinsley Dome field, Yazoo County, which handles the bulk of the production from that field, face a sharp curtailment due to use of rail facilities for military purposes and pending completion of Standard Oil Company of New Jersey's 175-mile pipe line from that field to Baton Rouge.

Madison County: C. L. Morgan's Whitworth 1, located 1914 feet north and 2036 feet east SWc 4-11n-3e, Madison County, two miles southeast of the Pickens field, Yazoo County is making approximately 25 bbls of fluid per hour through ¼-inch choke, one third salt water. The well has been tied into a four-inch line laid to location by Allied Pipeline Company to connect with its loading rack at Pickens. Phillips Petroleum Co. is drilling a test in the same section. Water in the well is laid to a faulty squeeze job and is not believed indigenous to the producing formation.

COMPLETIONS

Adams County: Wildcat—L. H. Simpson's Fairchild 1, c se se 18-9n-2w, elev 85 ft, tops Vicksburg, 937; Moody Branch, 1522; Cockfield, 1532; Sparta, 2315; Cane River, 3170; Wilcox, 3510; dry abnd 6015 ft.

Chickasaw County: Wildcat—Century Oil Co.'s Flaherty A-1, c s½ sw sw 8-13s-3e, elev 350 ft, abnd 2340 ft.

Copiah County: Wildcat—Sun Oil Co.'s Ainsworth 1, 1980 w and 2180 n sec 17-9n-7e, elev 447 ft, tops Moody Branch, 1790; Tallahatta, 2505; Cane River, 3280; Wilcox, 3747; Midway, 7165; Selma chalk, 8000; Eutaw, 9256; Tuscaloosa, 9370; abnd 9792 ft (shale).

Hinds County: Wildcat—Plains Prod. Co.'s Halifax 1, swc nw 1-7n-4w, tops Cook Mountain, 1302; Sparta, 1418; Cane River, 2193; Tallahatta, 2500; Wilcox, 2790; Caprock 3907; abnd 4000 ft (2 ft in salt).

Issaquena County: Wildcat—Gholson et al, Aden 1, c nw ne 31-9n-6w, elev 108 ft, tops (elec survey) Cockfield, 714; Watuble, 1223; Cane River, 2132; Tallahatta, 2480; Wilcox, 2757; Chalk, 5185; Tuscaloosa, 6000; core 6042-50 ft waxy and mottled red shale, abnd 6050 ft (shale).

Madison County: Wildcat—C. L. Morgan et al's Whitworth 1, 1914 n and 2036 ft e swc 4-11n-3e, elev 208 ft, 7-in csg 4918 ft, perf 4824-33 ft, top Cane River, 765; Tallahatta, 935; Wilcox, 1208; Midway, 3050; Wilburn sand, 4824-66 ft, flowed 473 bbls 24 hrs 20/64 choke, tp 110; cp 190; sw 30%, td 5663 ft.

Warren County: Wildcat—Magnolia Pet. Co.'s Hall 2, sec nw 39-17n-4e, elev 145 ft, tops (elec survey) Sparta, 1008; Cane River, 1908; Wilcox, 2315; Caprock, 3818; Dst 3821-26 open 15 mins, recovered 240 ft drilling mud, cored 3826-28 ft, recovered 1 ft caprock with slight oil stain, abnd 3856 ft. Placid Oil Co.'s Anderson-Tully 1, 1980 ft, e and 660 s nwc sw 36-17n-5e, elev 202 ft, tops (elec survey) Cane River, 2480; Tallahatta, 2690; Wilcox, 3037; abnd 5025 ft (shale).

Yazoo County: Tinsley Dome—J. P. Evans' Johnson 9, nwc sw ne 31-10n-2w, pump 16 bbls oil hourly, 7-in csg on bottom, perf 4975-5038 ft, 252 shots, tops Chalk, 4902; Woodruff, 4975-5054 ft, td 5073 ft. Frankel Bros.' Martin 3, 1296 s and 200 e nwc ne nw 1-9n-3w, pump 25 bbls hourly, td 4893 ft, tops Wilcox, 2030; Midway, 3948; Chalk, 4817; Woodruff, 4884-93 ft. Hassie Hunt's Stutts C-3, c sw ne se 30-10n-2w, pump 1200 bbls oil daily, td 4960 ft, elev 336 ft, tops Chalk, 4887; Woodruff, 4940-60 ft. Key & Beckett's Sanders 3, swc ne ne 2-9n-3w, elev 266 ft, Woodruff, 4875-4905 ft, pump 25 bbls oil hourly, td 4905 ft. Kirby Pet. Co.'s Stutz 8, se sw se 30-10n-2w, elev 362 ft, pump 24 bbls hour, td 5052 ft, Woodruff 4958-5044 ft. C. H. Lyons' Lank-Smith 3, sec nw ne 31-10n-2w, pump 22 bbls hourly, td 5012 ft, Woodruff 4952-5012 ft; Lank-Smith 4, swc nw ne 31-10n-2w, pump 22 bbls hourly, td 5026 ft, Woodruff 4958-5026 ft. Mid-States Oil Corp.'s Walker 1, nec nw se 2-9n-3w, pump 11 bbls hourly, td 5012 ft, Woodruff 5009-12 ft. Snowden & McSweeney's Ben Hanley 7, sw se se 35-10n-3w, pump 20 bbls hour, td 4810 ft, Woodruff 4790-99 ft. Union Prod. Co.'s Pettigrew 1, 1561 ft n and 497 ft w sec 10-10n-3w, no Woodruff, broken sw sand 5009-5198 ft, abnd 5801 ft.

WILDCAT STARTS

Hinds County—Carter Oil Co.'s Younger 1, sec 35-7n-1w, dr 1800 ft (core hole).

Madison County—Carter Oil Co.'s Cooper 1, c se ne 14-11n-3e, dr.

Michigan

Snow, Space Rulings Keep Operations Quiet

Lull continued in Michigan with heavy snow blocking lease and some main roads in both Reed City and Roscommon fields. Several rigs stacked waiting definite approval of location plan under new federal 40-acre ruling.

COMPLETIONS

Allegan County: Wildcats—Earl G. Gromer's Barnard A1, ne se nw 33-1n-14w, Traverse 1250 ft, abnd 1279 ft. J. H. Fitchett's Belt 1, se nw ne 10-4n-15w, Traverse 1580 ft, abnd 1635 ft. W. S. Cook's Brenner 1, se sw se 13-3n-13w, Traverse 1655 ft, abnd 1656 ft. Fisher-McCall's Henderson 1, nw nw nw 27-2n-12w, Traverse 1612 ft, abnd 1617 ft.

Allegan County: Trowbridge — Howard Gruenbauer's Hadden 1, sw ne se 20-1n-13w, Traverse 1371 ft, td 1375 ft, acidized 250 gals, pumped 30 bbls.

Allegan County: Overisel—H. T. Barnaby's Hoffman 1, ne nw sw 27-4n-14w, Traverse 1486 ft, abnd 1546 ft.

Bay County: Kawkawlin—United Driller's Kircher 3, nw ne ne 3-14n-4e, Dundee 2710 ft, td 2880 ft, acidized, pumped & flowed 315 bbls.

Clare County: Winterfield—Cities Service's Phares 2, c w½ ne se 29-20n-6w, flowed 227 bbls, Dundee 3733-41 ft. Taggart Brothers Co.'s Arndt 100, c nw 29-20n-6w, 4,447,000 gas, Stray sand 1380 ft.

Isabella County: Chippewa — Michigan Devonian's Workman 1, ne ne ne 4-14n-3w, acidized Traverse lime 2925 ft, td 3059 ft, swabbed and flowed 116 bbls.

Lake County: Reed City—Ohio's Pfuhl 2, n½ se se 24-18n-11w, flowed 359 bbls 2 hrs natural, Traverse lime 2940 ft, td 2950 ft. Pure's Morrison 2, c n½ ne ne 25-18n-11w, flowed 448 bbls, Traverse lime 2916-30 ft, td 2933 ft.

Osceola County: Lincoln — Taggart Bros.

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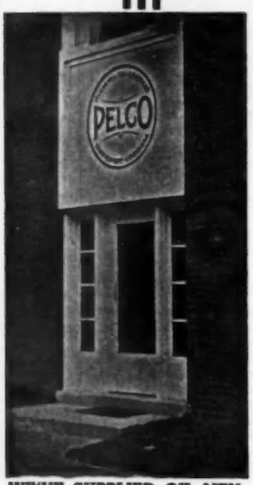
This (or had you heard?) is the season for corporation returns, income taxes, occupational licenses, excise taxes and such tripe, all liberally sprinkled with priorities and stuff like cheese on spaghetti. But if you think we're all snarled up like a pinto pony in a barbed wire fence, offer us a lump of sugar in the form of an order for something you can't get anywhere else. Of course we won't have it either, but you'll like the way we try. And we might fool the hell out of you!



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Co.'s Roberts 33, se sw se 7-18n-10w, abnd 1257 ft.

Ottawa County: Wildcat—Temple & Boo's Taylor 1, nw nw sw 31-7n-14w, Traverse 1673 ft, abnd 1685 ft.

WILDCAT STARTS

Allegan County—Bridger Basin Oil Corp.'s Armintrout 1, ne sw sw 34-2n-13w, rig. Voorhees Drilling Co.'s Sankofski 1, sw se ne 1-1n-16w, dr, Fisher-McCall's Salisbury 1, nw nw se 28-1n-12w, lcn.

Calhoun County—Continental's Bonnett 1, e½ se sw 8-2s-6w, dr.

Gladwin County—Ervin Major's State 1, c w½ sw nw 18-20n-2w, rig.

Mecosta County—Turner Pet. Corp.'s State R1, c w½ se nw 11-16n-7w, dk.

California

Drilling Slated in Kern, Los Angeles and Santa Barbara

Fresno County test slated for abandonment; second wildcat slated for Delano area, Kern County; plans set for northern outpost Newhall-Potrero area, Los Angeles County; southeast test soon for Santa Maria Valley, Santa Barbara County.

Fresno County: Barnsdall Oil Co. is preparing to abandon Ripperdan 1, Sec. 24-15-17, Raisin City-Kernan area, after obtaining small flow of water and scum of oil on production test interval 5033-5123 ft. Top gas sand placed 5005 ft, lower Ash bed 5010 ft, and Shell sand at 5021 ft, bottom 5161 ft.

Kern County: Location has been staked for another wildcat by Shell Oil Co. in the Delano area, location falling a half mile northeast SW corner Sec. 20-25-26 and to the southwest of company's test in 21-22-26. Former test bottomed at 6339 ft, after penetrating barren Vedder and Eocene.

Los Angeles County: Consideration is being given by The Texas Co. of a test on the north side of Barnsdall Oil Co.'s Rancho San Francisco lease in the Newhall-Potrero district. Location would be in Sec. 22-4-17.

Santa Barbara County: A showing of heavy oil has been encountered by John W. Lee in an outpost test, Sec. 33-10-33, one mile east of the southeast edge of the Santa Maria Valley field. Bottom is at 3503 ft with top of Miocene placed at 2440 ft.

COMPLETIONS

Fresno County: Northeast Coalinga—Standard's No. 57-19; 931 ft n, 2567 ft w sec 31-19-16, flowed 132 bbls, 8/64 bean 2150/2750 lbs, 20 ft perf 8246 ft, td 8247 ft.

Fresno County: Kettleman North Dome—KNDA's 36-2P, 1582 ft n, 1587 ft e swc 2-22-17, perf 9775 ft, flowed 197 bbls 2990/3250 lbs, td 9780 ft; 341-20Q, 640 ft s 658 ft w nec 20-22-18, flowed 200 bbls 3250/3600 lbs, 349 ft, perf 9775 ft, td 9780 ft.

Kern County: Devils Den—Raymond D. Herzog's Marine 35, 660 ft s, 312 w nec 26-25-18, pumped 5 bbls, td 226 ft.

Kern County: Elk Hills—Standard's No. 260-35S, 2040 ft n, 754 w nec 35-30-25, pumped 280 bbls, 120 ft perf 2964 ft, td 2965. No. 2113-35S, 1653 ft n, 1453 ft w sec 35-30-24, pumped 121 bbls, 149 ft perf 2936 ft, td 2937 ft.

Kern County: Greeley—General's Hammer 1, se nw 12-29-25, flowed 1056 bbls, 40 ft perf 11,499 ft, 20/64 bean, 1000/1175 lbs, top Rio Bravo 11,481 ft, td 11,500 ft.

Kern County: Mount Poso—Shell's Griffith Fee 4, 977 ft n, 807 ft w e¼ c 5-27-28, pumped 4 bbls, 60 ft perf 1835 ft, td 1835 ft. D. G. Vedder's BNB-7, 520 ft s, 660 ft e nwc ne 32-26-28, pumped 357 bbls, 25 ft perf 1670 ft, td 1670 ft.

Kern County: Rio Bravo—Superior's Pasadena Realty 7, 330 ft s 1070 ft w e¼ cor ne 33-28-25, flowed 1590 bbls, ½-in ch, 54 ft perf 11,440 ft, top Rio Bravo 11,384 ft, td 11,440 ft.

Kern County: Ten Sections—Shell's KCL A-44-30, 2311 ft s 2433 ft e nwc 30-30-26, flowed 429 bbls ⅛-in ch, 750/700 lbs, 161 ft perf 8197 ft, td 8200 ft.

Los Angeles County: Dominguez—Union's Callender 72, 2736 ft, n 3772 ft w c l Victoria & Central, flowed 829 bbl, 1-in ch, 658 ft perf 7399 ft, td 7400 ft.

Los Angeles County: Long Beach—Shell's Cresson 15, 100 ft n 70 ft w c l Willos & Gundy, pumped 106 bbls, perfs 2465 to 3143 ft, td 3200 ft. Shell's Alamitos 47, 294 ft n 389 ft e c l 20th & Loma, pumped 63 bbls, 182 ft perf 4973 ft, td 4975 ft.

Los Angeles County: Oak Canyon—Hathaway Co.'s Ram 2, 530 ft s 204 ft w c 31-5-17, pumped 15 bbls, perf 2665-2708 ft, 2725-2735 ft, td 8091 ft. top shallow zone 2650 ft.

Los Angeles County: Rosecrans-Athens—Barnsdall's Trust 7, 811 ft n 327 ft e c l Figueroa & Rosecrans, flowed 150 bbls, 751 ft perf 8558 ft, td 8589 ft.

Los Angeles County: Wilmington—Pacific Western's Murphy 1, 175 ft s 160 ft w E & McFarland, pumped 170 bbls, perf 2551-2714 ft, 2815-2957 ft, 3218-3525 ft, td 3585 ft. Ring Oil Co.'s Wilmington 4, 101 ft n 113 e I & Eubank Sts, pumped 570 bbls, 710 ft, perf 3610 ft, td 5727 ft. Union Pacific's UP 215, 6393 ft s 2390 ft e c l Ford & Anaheim, flowed 464 bbls, 10/450 lbs, perf 3956-4045, 4060-4110, 4125-4182, 4197-4284 ft, td 4414 ft.

Sacramento County: Rio Vista—Standard's Anderson 3, 2-3-2, flowed 16,924 gas, 132 ft perf 4459 ft, td 4460 ft. Bradford Comm. 2, 2605 ft n 826 ft w sec 20-3-3, flowed 16,787 gas, 45 ft perf 4270 ft, td 4272 ft.

Santa Barbara County: Santa Maria Valley—Capital Co.'s MacDonnell 2, 330 ft s 330 ft e n¼ c ne 28-10-34, pumped 530 bbls, 431 ft perf 5250 ft, top Miocene 4840 ft, td 5250 ft. MacDonnell 3, 673 ft s 690 ft w ne lease cor, pumped 559 bbls, 402 ft perf 5308 ft, td 5310 ft. Pacific Western's Samarin 3, 330 ft s 330 ft e c nw 27-10-34, pumped 38 bbls, 203 ft perf 4595 ft, td 4904 ft, top Monterey 4449 ft, Franciscan 4890 ft. Union's Moretti 3-3, 248 ft s 237 ft e nec J. A. Brown ppty 15-10-35, flowed 1020 bbls, 250 ft perf 5446, td 5447 ft.

Ventura County: Santa Paula—Shell's Santa Paula Y Saticoy 1, 1255 ft n 3454 ft w sec 21-3-21, top Mud Pit shale 3200 ft, abnd 5952 ft.

Ventura County: Ventura Avenue—British American Oil Producing Co.'s Hartmann 8, 722 ft n 583 ft w c l No. 11, flowed 1000 bbls, perf 7725-7890, 7919-8599, 8799-9680 ft, td 9680 ft.

WILDCAT STARTS

Fresno County—D. G. Veeder's Glide 23-1, 23-27-28, lcn. Shell's Smith Cairns 3, 11-26-27, lcn.

Los Angeles County—Bell View Oil Synd.'s P-1, 17-2-11 foundation.

Ventura County—Spencer D. Coates' Pirie 5, 7-4-22, rigging.

Ohio

COMPLETIONS

Ashland County—Robinson et al, Spring 1, abnd 2997 ft. Wallace & Sons, Derr 1, 0.05 gas, 1390 ft.

Coshocton County—Blackburn et al, Funk 1, 0.13 gas, 3055 ft.

Cuyahoga County—East Ohio, Glendenning 2, 0.95 gas, 2273 ft.

Guernsey County—George Jewell et al, McManaway 1, abnd 1255 ft.

Knox County—Ohio Fuel, Giffin 1, abnd 2785 ft.

Licking County—J. T. Bebout, Holtz 5, abnd 2775 ft.

Medina County—P. C. Bishop, Bellus 1, 115 bbls oil, 3167 ft. Ohio Fuel Gas, Van Dusen 1, 10 bbls oil, 3214 ft.

Monroe County—Quarry Oil & Gas Co., Simmons 6, 0.07 gas, 2005 ft.

Muskingum County—Wittmer Co., Virts 1, abnd 4088 ft.

Perry County—Pure Oil Co., Cannon 3, 76 bbls oil, 3270 ft.

Washington County—Best Run Oil Co., Myers 3, 0.08 gas, 1081 ft. Earl Montgomery, Fee 1, ½ bbl oil, 840 ft.

Wayne County—Kemrow Co., Long 1, abnd 3195 ft.

New York

COMPLETIONS

Allegany County—Messer Oil Co., Vosburg farm, Bolivar, 5 bbls, 1352 ft; Vosburg farm, Bolivar, 5 bbls, 1382 ft. R. B. Moore et al, Curtis farm, Bolivar, 7 bbls, 1244 ft. Pure Pen Pet. Co., Christman farm, Bolivar, 5 bbls, 1443 ft. Messer Oil Co., Shaner farm, Bolivar, 12 bbls, 1436 ft. I. B. Lawrence, Allen farm, Alma, 4 bbls, 1161 ft. Ebenezer Oil Co., Ketchum farm, Scio, 5 bbls, 1162 ft. Hardy & McBride, Garthwaite farm, Alma, 10 bbls, 1330 ft. W. O. Taylor Est., Coyle farm, Alma, 9 bbls, 1143 ft. Bradley Bros. Corp., Withey farm, Bolivar, 7 bbls, 1369 ft. Almy & Pierce et al, Owens-Mather farm, Bolivar, 7 bbls, 1356 ft. L. H. Thornton et al, Smith farm, Willing, 5 bbls, 1249 ft. J. Stout, G. O. Graves et al, Roeske farm, Willing, 5 bbls, 1181 ft. Bliven Hill Oil Co., McEwen-Norton farm, Amity, 8 bbls, 874 ft. H. W. Patterson et al, Fuller farm, Amity, 5 bbls, 734 ft; Fuller farm, Amity, 5 bbls, 760 ft. Messer Oil Co., Koehler farm, Clarksville, 5 bbls, 1372 ft. Wilson Oil Co., Wales farm, Genesee, 5 bbls, 1339 ft. A. C. Shaner Oil Co., Congdon farm, Clarksville, 6 bbls, 1250 ft. Thornton, Shaner & Co., Howe farm, Bolivar, 5 bbls, 1373 ft. New York Oil Co., Brown farm, Bolivar, 5 bbls, 1344 ft.

INTAKE WELLS

Messer Oil Co., Vosburg farm, Bolivar, 1380 ft; Vosburg farm, Bolivar, 1382 ft. Bradley Prod. Corp., Nobles farm, Alma, 1278 ft. South Bolivar Oil Co., McKelvey farm, Bolivar, 1339 ft. Producers Oil Corp., Keller-Scott farm, Wirt, 1055 ft. A. G. Maitland Est., McCutcheon Lot, Alma, 1110 ft. Bradley Prod. Corp., Rolls farm, Alma, 1266 ft; Rolls farm, Alma, 1253 ft. The Otsquago Corp., Pike farm, Alma, 1388 ft. Bradley Prod. Corp., Fitz-Carroll farm, Bolivar, 1367 ft. H. W. Patterson et al, Wright farm, Scio, 753 ft. Bliven Hill Oil Co., Rogers farm, Amity, 871 ft. Messer Oil Co., Beever farm, Wellsville 933 ft.

West Virginia

COMPLETIONS

Boone County—Hope Natural, Canterbury 8581, 1.57 gas, 1378 ft.

Calhoun County—Paul B. Bowser et al, McDonald 2, 20 bbls oil, 2088 ft.

Clay County—Pittsburgh and West Virginia, Elk River 7793, 0.2 gas, 2170 ft.

Harrison County—Hope Natural, Griffin 2301, 0.08 gas, 2477 ft.

Jackson County—West Va. Gas, Custer et al 1, 8.42 gas, 5235 ft.

Marion County—Monongahela Co., Hawkins 3, abnd 2900 ft.

Putnam County—Win Gas, Johnson 1, 0.19 gas, 2125 ft. Buffalo Creek Co., Allen 1, 0.12 gas, 2300 ft.

Ritchie County—A. R. Kelly, Payne 1, abnd 2135 ft.

Tyler County—Gale Oil Co., Smith 13, 10 bbls oil, 1530 ft.

Wayne County—Owens, Libby-Owens, Mills 1, gas, 3477 ft.

Pennsylvania

COMPLETIONS

Armstrong County—Peoples Natural Gas, Kunkle 1, 0.05 gas, 3400 ft.

Clarion County—Jefferson & Elk, Reinsel 2, 0.03 gas, 3010 ft.

Greene County—Convex Glass, Gabler 1, 4.5 gas, 1495 ft. Equitable Gas Co., Rich 1, 0.06 gas, 2947 ft.

Washington County—H. B. Scott et al, McNary 1, abnd 2975 ft. J. L. Dunn et al, Pedicord 1, 0.09 gas, 1424 ft.

Westmoreland County—Apollo, Masters 1, 0.98 gas, 1684 ft.

Montana

COMPLETIONS

Fallon County: Baker-Glendive—Carter Oil Co.'s Unit 1, c sw se 19-4n-62e, abnd 9678 ft, new Montana depth record.

Glacier County: Cut Bank—Glacier Production Co.'s Barrington 3, c sw se 18-33n-5w, cable tools, elev 3820 ft, 90 bbls swabbing shot, td 2993 ft. Lawlor & Hoerr's Clarkson 2, sw sw sw 9-33n-5w, cable tools, pump 150 bbls, td 2900 ft. Texas Co.'s Bonnet 4, c n l sw sw 8-32n-5w, rotary, swab 140 bbls, td 2904 ft. Texas Co.'s Govt. 5-B, c se nw 20-32n-5w, rotary, elev 3578 ft, swab 90 bbls, pb 2785 ft, td 2796 ft.

Toole County: Kevin-Sunburst—Barmac Production Co.'s Maughan's 15, sw ne ne 30-35n-1w, cable tools, abnd 1537 ft. Henry Vanderpas' Ward 5, nw nw sw 29-35n-3w, cable tools, pump 25 bbls, 1748 ft td.

Wyoming

COMPLETIONS

Park County: Frannie Dome—Continental's Northern Pacific 2 Lease-2, nw sw ne 23-58n-98w, rotary, elev 4672 ft, top Tensleep 3385 ft, td 3447 ft, pump 323 bbls; Northern Pacific 5 Lease-1, nw se se 23-58n-98w, rotary, pump 283 bbls, td 3498 ft.

Park County: Oregon Basin—Husky Refining Co.'s Rousseau 4-A, nw se sw 33-51n-100w, rotary, elev 5391 ft, top Embar 3635 ft, td 3702 ft, flow 240 bbls. Yale Petroleum Corp.'s Frisby 3-A, ne sw ne 32-52n-100w, rotary, flow 465 bbls 18/64-in ch, 8¼-in csg 3165 ft, Embar 3165-3230 ft.

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MEN IN THE INDUSTRY'S NEWS

BOWMAN THOMAS, Humble Oil and Refining Company, was elected chairman of the Houston chapter of the American Petroleum Institute, division of production, at a meeting January 14. Other new officers are A. W. Baucum, The Texas Company, first vice chairman; W. S. Crake, Shell Oil Company, second vice chairman; Van D. Bennett, Bethlehem Supply Company, reelected secretary and treasurer. Paul Gaurin, Shell Oil Company, is retiring chairman.

New members of the advisory board are E. O. Buck, assistant supervisor of District 3, Office of Petroleum Coordinator; Byron Meredith, Sinclair Prairie Oil Company; J. U. Teague, Hogg Oil Company; I. W. Alcorn, The Pure Oil Company; Rex Hamaker, Reed Roller Bit Company; Gordon Richmond, Hughes Tool Company. Speaker at the meeting was T. E. Swigart, President of Shell Pipe Line Corporation, who spoke on "The Place of Pipe Line Transportation in the Development of the Southwest." (See page 21.)

C. E. Reistle, Jr., Humble Oil & Refining Company, was chairman of a committee which announced creation of a $100 cash scholarship to be presented each year to an outstanding engineering student at The Rice Institute. Members serving with Reistle were J. U. Teague, Hogg Oil Company; L. C. Waterman, Petroleum Rectifying Company; Warren Baker, THE OIL WEEKLY; Rex Hamaker, Reed Roller Bit Company; Paul Gaurin, Shell Oil Company; Professor A. D. Garrison, The Rice Institute.

HENRY EMMETT GROSS of the petroleum engineering department of Texas A. & M. College has been appointed associate petroleum production analyst in the Chicago office of the Office of Petroleum Coordinator. He has been an associate professor at A. & M. since 1938 and for two years previous was assistant professor of petroleum engineering at the University of Oklahoma. Earlier he was with Shell Oil Company in Kansas, Oklahoma, Texas and California. He once was on the engineering staff of Pacific Western Oil Company in California. Gross was graduated with a B.S. degree in mining engineering from the Missouri School of Mines in 1928 and a M.S. degree from the University of Illinois in 1933.

DOUGLAS P. BAILEY has been appointed director of refining for District No. 2 with headquarters in Chicago it was announced by Deputy Coordinator Ralph K. Davies January 14. A graduate of the University of Texas, Bailey has been

W. S. (Buck) Morris, left, organizer of the East Texas Section of the American Institute of Mining Engineers, was honored January 13 for his work in the section. The gift, an inscribed pen desk set, was presented by N. N. Jones, right, 1941 chairman. Jones, presenting the gift, enumerated Morris' activities. He was first AIME chairman, delegate to the annual meeting in New York in 1940, a leader in obtaining the annual meeting of the petroleum division for Dallas in 1941, a member of the publicity committee of the East Texas section in 1941, a member of the board of directors in 1942, and a member of the defense committee, 1942. In his national activities, he served as chairman of the paper and program committee in 1940-41, and is associate chairman of the petroleum division for 1942. Jones explained that the "gift was presented by the East Texas Section of the AIME in appreciation of and in recognition of his interest in each member, and work in the national institute as well as his activities in the local section."

More than 200 members and guests attended the second annual meeting of the Houston Chapter of Nomads January 14 at the Houston Club. Officers were elected for 1942 and a report given on the club's finances and membership. Standing, left to right, W. J. Nutto, Reed Roller Bit Company, sergeant-at-arms; Gordon Richmond, Hughes Tool Company, vice president; Ray L. Dudley, president, Gulf Publishing Company, president; C. E. Whitney, Baker Oil Tools, Inc., elected national regent and retiring secretary-treasurer. Seated, left to right, Carl Vogt, Shaffer Tool Works, assistant sergeant-at-arms; H. J. Craig, Baash-Ross Tool Company, secretary-treasurer; O. W. Morgan, Byron-Jackson Company, assistant secretary-treasurer. Dudley also was elected a national regent.

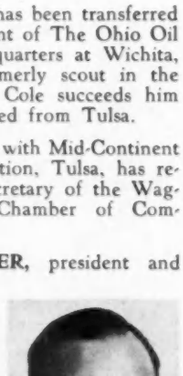
active in the oil industry since 1922, when he went to work with Standard Oil Company (Indiana). He joined The Texas Company in 1927 and has been with them since, with the exception of a period from 1934 to 1940 during which he was superintendent of a refinery in France.

JAMES A. LEWIS, vice president of Core Laboratories, Inc., Dallas, delivered a paper at the meeting of the Mid-Continent section of the American Institute of Mining and Metallurgical Engineers at Tulsa, January 12. The paper covered the interpretation of the results of laboratory work on locations.

MILTON BARRETT has been transferred to the land department of The Ohio Oil Company with headquarters at Wichita, Kansas. He was formerly scout in the Enid district. Virgil Cole succeeds him at Edmond, transferred from Tulsa.

W. K. CARR, formerly with Mid-Continent Oil and Gas Association, Tulsa, has resigned to become secretary of the Wagoner (Oklahoma) Chamber of Commerce.

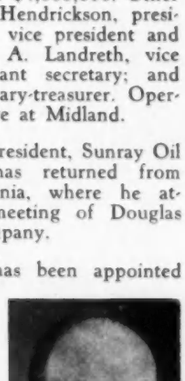
A. L. FREEDLANDER, president and general manager of The Dayton Rubber Manufacturing Company, Dayton, Ohio, was appointed deputy to the chief of the rubber and rubber products division of the Office of Production Management December 26. Freedlander has been in the rubber industry for 28 years. Leaving the development division of one of the large Akron companies 22 years ago, he joined Dayton Rubber as factory manager. Several years later he was made vice president, and became president and general manager in 1936. Freedlander is credited with a long list of developments in rubber chemistry, engineering and manufacture. He served the government during the first World War.



ED A. LANDRETH of Fort Worth is chairman of The Landreth Company, a new Texas corporation formed to succeed Landreth Production Corporation, which sold virtually all its producing properties to Stanolind Oil & Gas Company December 1 for $4,000,000. Other officers are: A. N. Hendrickson, president; S. H. Casteel, vice president and chief geologist; W. A. Landreth, vice president and assistant secretary; and W. M. Smith, secretary-treasurer. Operating headquarters are at Midland.

F. L. MARTIN, vice president, Sunray Oil Company, Tulsa, has returned from Wilmington, California, where he attended the board meeting of Douglas Oil & Refining Company.

BERT M. BROCK has been appointed manager of industrial relations for John A. Roebling's Sons Company, Trenton, New Jersey. Brock for the past year has been director of industrial relations, Pittsburgh District, Carnegie Illinois Steel Corporation, and prior to that was assistant director of industrial relations for the U. S. Steel Corporation of Delaware, Pittsburgh, Pennsylvania. Previously, he was



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A BRIGHT FLOOD
A PIERCING SPOT
It's a 2 Light Lantern Safe to Use—Easy to Carry — Low in Cost

This is Ecolite Lantern No. 72—a double purpose, low priced electric lantern that gives a broad, brilliant floodlight or a 1500 foot focusing spotlight. These two features, plus the Ecolite pivot feature, make No. 72 the most useful portable lantern in the industry.

No. 72 carries the Underwriters' Laboratories recommendation for use in Class 1 Group D hazards and gives a safe, dependable light under all conditions.

Available Now at Supply Stores

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3100 W. Cherry St. Milwaukee, Wis.

EQUAL DISTRIBUTION OF PRESSURE

UNIBOLT Couplings with their three interlocking shelves, or 3-point suspension, employ a proven principle and thus assure equal distribution of pressure on the seal ring.

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HOUSTON

UNIBOLT
THE ONE BOLT COUPLING

manager of industrial relations for Columbia Steel Company at San Francisco.

WILLIAM L. HORNER, of Core Laboratories, Inc., spoke on "Measurable Reservoir Characteristics as a Basis for Spacing and Development," at the monthly meeting of the South Texas Geological Society in Corpus Christi January 16.

JAMES F. LINCOLN, president of The Lincoln Electric Company, Cleveland, Ohio, left January 12 on a war industry speaking tour. He will travel to 17 cities to speak before production men, manufacturers and engineers on methods of speeding war production by means of arc welding.

His itinerary includes: Atlanta and Toccoa, Georgia; Mobile and Birmingham, Alabama; Pascagoula, Mississippi; New Orleans and Shreveport; Houston; Phoenix, Arizona; Los Angeles; San Francisco; Portland; Seattle; Vancouver, British Columbia; Salt Lake City; Denver, and Chicago.

REP. LESTER BOONE of Fort Worth has informally announced his candidacy for the Texas Railroad Commission. During the last Legislature, Boone was an active leader in opposing the bill to create a separate oil and gas commission.

GORDON HEID of Shell Oil Company showed motion pictures of the East Indies, including scenes on the islands of Java, Madura, Ambon and New Guinea, before the Houston Geological Society January 15.

CHARLES B. WILLIAMS, manager of West Texas-New Mexico producing division of The Texas Company, and former production manager of Colombian Petroleum Company, was guest speaker at the Fort Worth Geological Society's January 12 luncheon meeting, giving an illustrated talk on the Barco field, Colombia.

Squeaks from the Bull Wheel

Definitions

"Papa, what is a prophet?"

"My son, a prophet is a man who tells you what is going to happen, but doesn't bet any money on it."

Fair Deduction

My sakes; John writes he threw the hammer two hundred feet.

Why, he must have hit his thumb an awful whack.

Spoiled Brat

At breakfast one morning the child pushed her cereal away, pettishly announcing that she did not want it and would not eat any of the breakfast.

"Well, dear, what would you like?"

A whimper: "I want a worm."

Daddy, who would not deprive her of her slightest wish, hurried to the garden and returned with a nice fat one which he laid on spoiled daughter's plate. "There you are, my dear."

Indignant sobs: "But I want it cooked."

It was sent into the kitchen, rolled in batter, cooked and brought back.

Sobs again: "I want Daddy to have half."

Daddy divided the worm, pulled himself together, and managed to get his portion down.

This time sobs and howls: "But that was the part I wanted."

Overheard in Picadilly

Two small British boys were gazing at the shop windows decorated for Christmas. Presently they came to a butcher shop, and one of them pointed to a number of hams suspended from a large holly branch. "Look, Tom," he said, "look at them 'ams agrowing up there."

"Get away," said the other; "'ams don't grow."

"Well, that's all you know about it," said the first, scornfully; "ain't you ever 'eard of an 'ambush?"

A Slight Mistake

"How's the wife?"

"Bad. She's got quinsy."

"Good heavens! How many does that make altogether?"

Tails You Lose

A tourist returning after a trip abroad was asked the usual question by the customs official: "Have you nothing to declare, madam?"

"No."

"Then am I to understand that the fur tail hanging below your coat is your own?"

A Wise Guy, Eh!

"This vase is over 2000 years old, sir."

"Oh yeah! Don't try to pull that stuff over me. It's only 1941 now."

Distinction

"Anyone on the next green, caddie?"

"Yes sir; there's a gentleman and his caddie, and a man carrying his own clubs."

Serious Casualty

A Scotsman had been presented with a pint of rare whisky and as he was walking home a car knocked him down and hurt his leg badly. Picking himself up he limped down the road when suddenly he felt something trickling down his leg. "Losh," he groaned, "I hope that's blood."

Point Blank

The conceited screen star was making a nuisance of himself at the party. He never let the conversation touch on any other subject than himself. Finally he turned to the hostess and said:

"And how did you like my last picture?"

"I was certain," she replied, "that it was."

Resolution

What habit did you try to give up the first of the year?

I tried to give up writing 1941.

A Little Bird Told Me

"You have had that parrot for a long time, Miss Ethel?"

"Yes, several years."

"Quite intelligent, isn't he?"

"Very. He can imitate almost anything."

"Can he imitate the sound of a kiss?"

"No, sir, he does not attempt an imitation of a sound he is not accustomed to hear."

Parrot (reminiscently): "Wait, George dear, till I take this bird out of the room."

War Tales

"You have never kissed so wonderfully before, Laura. Why is that? Because we are in a blackout?"

"No. It's because my name is Vera."

FOR SALE

Used Rotary Drilling Rigs

1 National, steam rotary rig complete with 4080 feet 5-9/16 O.D. 25.25 lb. API interior upset seamless drill pipe.

1 Oilwell electric rotary with Hild drive complete with 5800 feet 4½ O.D. interior upset seamless drill pipe.

HUSKY REFINING CO.

CODY, WYO.

NOTES FOR THE Equipment Buyer and User

Black-Out Coating

CARBOZITE CORPORATION

Carbozite Corporation of Pittsburgh has announced a new black-out coating for industrial plant windows and skylights that meets specifications, and features easy removal when danger no longer exists.

Known as Carbozite Standard Black-Out Black, this coating is not a paint but a smooth flowing liquid coating, manufactured from a pyrobitumen ore, especially refined and mixed with quick drying, volatile solvents and a secret ingredient which provides complete opacity and an absolutely gloss-free surface. No preference rating or priority is needed to obtain Blackout-Out Black as its main ingredients consist of non-essential hydrocarbons which are not in demand for munitions or other war materials. Of particular interest is its ease of application and outstanding durability under even the most actively corrosive conditions, which permits its use anywhere.

Carbozite Black-Out Black can be sprayed or brushed on quickly. Only one coat is required to assure complete protection against light penetration and drying is completed in 6 to 8 hours leaving a dead black, gloss-free coating that is as nearly totally non-reflective as is possible to obtain.

Electric Hoist

WRIGHT MANUFACTURING DIVISION OF AMERICAN CHAIN & CABLE COMPANY

Wright Manufacturing Division of the American Chain & Cable Company, Inc., York, Pennsylvania, and Bridgeport, Connecticut, has added the Speedway, a new light weight, compact wire rope elastic hoist, to its present line.

The Speedway is obtainable in capacities from 250 up to 1000 pounds. Portability, flexibility and accessibility are outstanding features. Like an electrical accessory, it is ready to go to work anywhere. Just plug in on your lighting circuit, or use with conductor systems.

Outstanding features of Speedway construction—push-button control, weather-proof, acid-proof, dust-proof, preformed hoisting cable on drum winding, eliminating slack chain fouling loads, safety limit switches, safety load blocks.

Furnished for lug, hook or trolley suspension. Can be mounted parallel or crosswise to runway beam when used with trolley.

Furnished for 110- or 220-volt single-phase 60-cycle current; also for 220- or 440-volt 3-phase 60-cycle.

T. J. Bettes Company Offers Production Loans

T. J. Bettes Company, Houston, has opened a new department to lend money on producing oil properties. T. J. Bettes, president, said that he felt there is a definite need for such a service to those engaged in the oil business, and that his plan for arranging loans has been under consideration for several months and is now functioning.

Bettes added that loans on producing oil properties will be processed and serviced by his company in Houston on the same basis as are real estate mortgage loans. His company, he concluded, is particularly interested in refunding existing loans where the present producer would be benefited.

Valves

R-S Products Corporation, 4530 Germantown Avenue, Philadelphia, Pennsylvania, has issued Catalog No. 10-B, 16 pages, featuring standard and special butterfly valves for the control and tight shut-off of air, gas, steam, liquids and semi-solids under high and sub-zero temperatures and varying pressures from 2 to 300 p.s.i. Contains performance characteristics under all conditions of service, manual and automatic control, specifications, flow charts and a discussion and illustration of the use of bronze, steel, meehanite, molybdenum and other metals for special conditions including solenoid emergency service.

An interesting explanation of wedge-tight shut-off by means of accurate machining and the angle of closing of the butterfly vane against the body of the valve, is also featured.

New Oil Field Map Shows Developments in Illinois

A new map showing oil fields in Illinois has been issued by Jerry Robertson, Evansville, Indiana. The map covers what is called the tri-state area, embracing southeastern Illinois, southwest Indiana, and western Kentucky. It shows development to January 1, 1942. Formations from which wells are producing, dry holes and elevations are marked. Price for a paper copy is $5, linen $10.

Dresser Acquires Bovaird and Seyfang Manufacturing Company

Dresser Manufacturing Company, Bradford, Pennsylvania, has announced acquisition of Bovaird and Seyfang Manufacturing Company of Bradford, as a wholly-owned subsidiary.

Chief motive in acquiring Bovaird and Seyfang was to obtain extra manufacturing capacity for Clark Bros. Company of Olean, a Dresser subsidiary, whose potential business during the period of the war boom is far in excess of its manufacturing capacity. Bovaird and Seyfang has manufacturing facilities of 147,000 square feet of plant and buildings, equipped with heavy machine tools, a boiler shop, and grey iron foundry, all of which are useful adjuncts that should enable Clark Bros. Company not only to speed delivery of engines to the Maritime Commission but also to accept any additional business that may be available in its own field—the oil and gas industry.

Bovaird and Seyfang was founded in 1874 as a forge shop manufacturing oil and gas field equipment. The company was incorporated in 1891. From the early 1900's until 1920, its chief activities were devoted to the manufacture of steam engines and boilers. Today its main products, sold almost entirely in the Bradford field, are gas engines, diesel engines, gear and band wheel pumping powers, drilling and fishing tools, tanks and pumping jacks. These products, together with a line of well supplies, are and will continue to be distributed through one local store in Bradford.

Subsidiaries of Dresser Manufacturing Company, in addition to Bovaird and Seyfang, now include: The Bryant Heater Company of Cleveland, makers

WEIGHT INDICATOR POINTS
ANY WELL WORTH DRILLING is worth drilling right. And inaccurate weights, speeds, pressures and other factors not only result in corkscrew holes and lower footage, but cause rapid depreciation of costly drilling equipment as well.
The remedy is easy. A Martin-Decker "Sealtite" installed right where your driller can watch the gauges, will tell him his weights, speeds, pressures and torque—accurately . . . and with this information he can drill faster, straighter and more economically!
MARTIN-DECKER CORP., LONG BEACH, CALIF.

HOW TO SAVE MONEY ON YOUR MUD BILL

Powdered Chestnut Extract is the only true substitute for Quebracho Extract to reduce water loss, condition your mud cake and keep your mud bill to an absolute minimum.

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NO GASKETS
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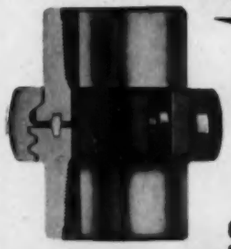

BRONZE OR STEEL SEAL RING

OIL CITY BRASS WORKS
FOUNDERS · MANUFACTURERS · MACHINISTS
Beaumont, Texas, U.S.A.

of gas-fired heating and air-conditioning equipment; Clark Bros. Company, of Olean, manufacturers of gas-driven engines and power-driven compressors; Pacific Pump Works of Huntington Park, California, and Dresser Manufacturing Company, Ltd., of Toronto, Ontario, Canada.

Letters to the Editor

DEAR SIR:

I add my protest to the many am sure you will receive, because of the elimination from THE OIL WEEKLY of the detailed information concerning well completions, etc.

This feature has a special significance to me, perhaps, but cannot believe I am the only one who has used and relied upon this information. It has been a factor in keeping my subscription with you continuously since 1917, and it will have a bearing on my continuance as such, in the absence of better field data than your January 5 issue contains. The data given there, is fragmentary and incomplete, and when one checks it against his own district, of which he has some knowledge, he wonders—if he does not actually appraise it at equal value for other districts.

The fact must be appreciated that many of your subscribers obtain this data from other sources, and, therefore, are not interested in this feature of your publication, and that there are many others who value the publication for something else. Further, any thinking person knows it costs something to gather reliable and full statistics, but I think all will agree that it takes a special service to the business a publication serves, to raise it above a technical news publication or a propaganda sheet.

Hope you will be able to restore this feature to your publication, even if it costs the subscriber something.

A. C. PARKS,
Wichita Falls, Texas.

DEAR SIR:

We regret to note the change in form of the Summary of Drilling Operations in the United States. The data as previously presented were of great value to us. Is there a possibility that you may go back to the former method of reporting these operations?

J. JAY DUNN,
Assistant to Vice President.

National Tube Company,
Pittsburgh, Pa.

Change to presenting completion data to the form now used followed deliberations that decided the new form gives added information. In the tabular form we had given only location, well depth and "initial production." All of this information is given in the new arrangement, together with other pertinent data, such as perforation points, chokes, etc. One factor influencing the change is that "initial production," because of varying local rules, has become an obscure term, so that the data as now presented is much more informative as to the potential value of the well.

Rearrangement of information, placing the completion data under the reports of current development in the several districts has been done with the idea of convenience of readers who are interested in those particular districts, making it possible for them to get it all on one page.

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* Indicates that detailed information on the manufacturer's products or services may be found in the 1941 edition of The Composite Catalog of Oil Field & Pipe Line Equipment.

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OIL STORAGE TANKS

3—55,000 Bbl.
1—25,000 Bbl.
5—10,000 Bbl.
3— 5,000 Bbl.
4— 2,500 Bbl.
1— 1,000 Bbl.
2— 750 Bbl.
2— 600 Bbl.
2— 1,200 Bbl. Agitators

Can be inspected at Middlesex Refinery Company, Raritan, N. J.

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